

FIG. 1

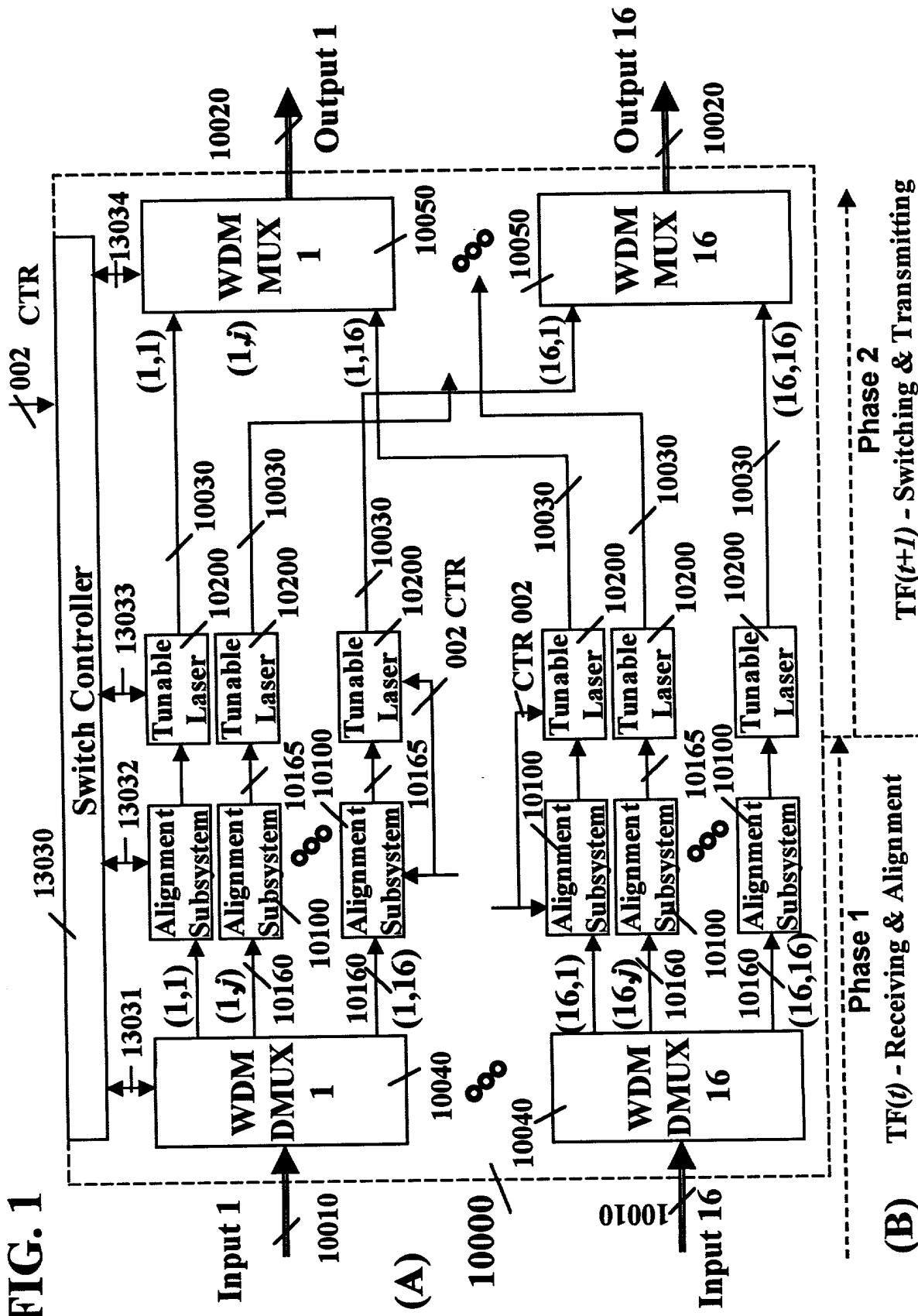


FIG. 2

Example:
TF1=15.325 microseconds - High_capacity = OC-192
TF2 = 125 microseconds - Low_capacity = OC-3
 $\Rightarrow c = 64 = (OC-192/OC-3)$

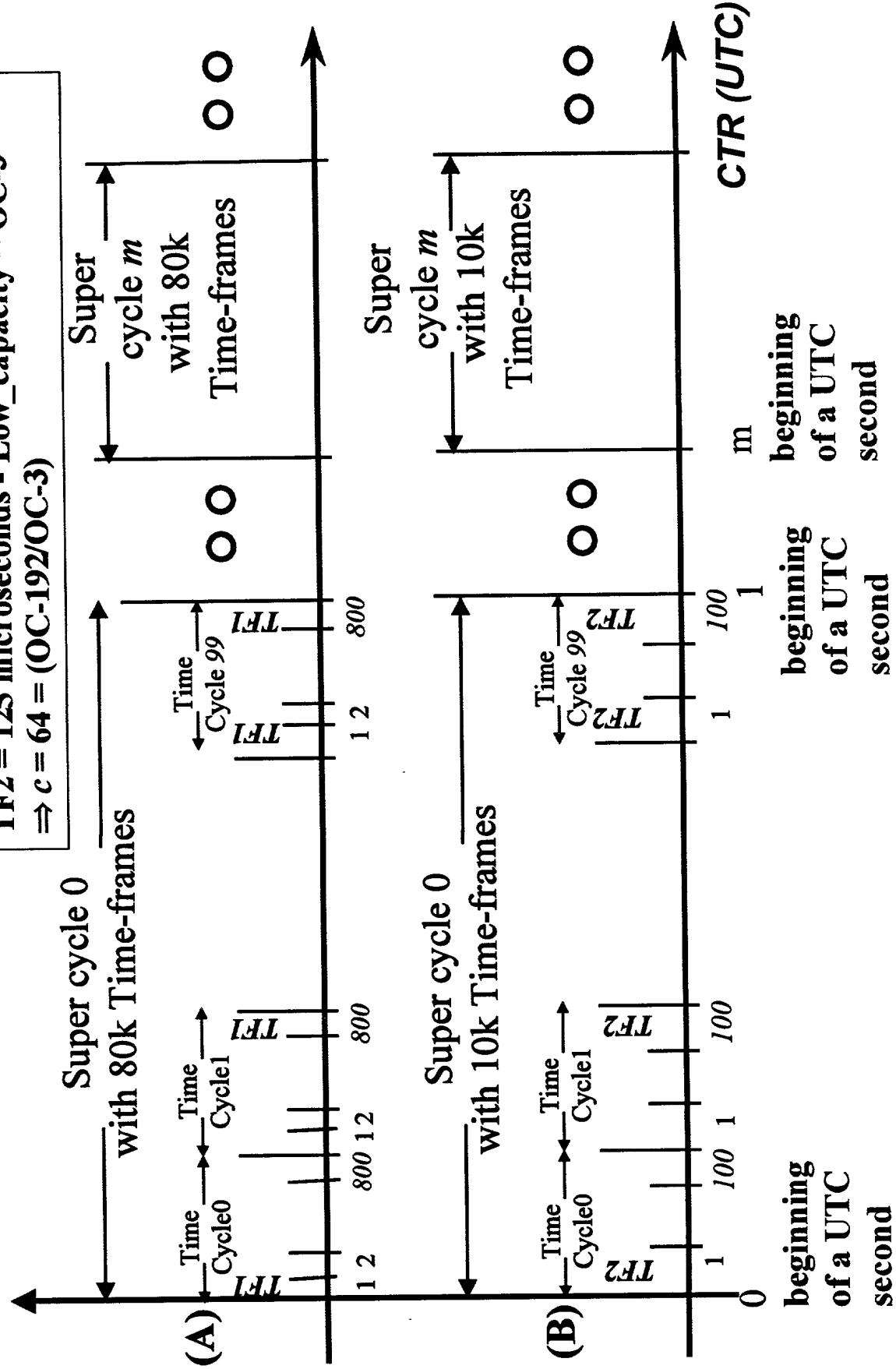


FIG. 3

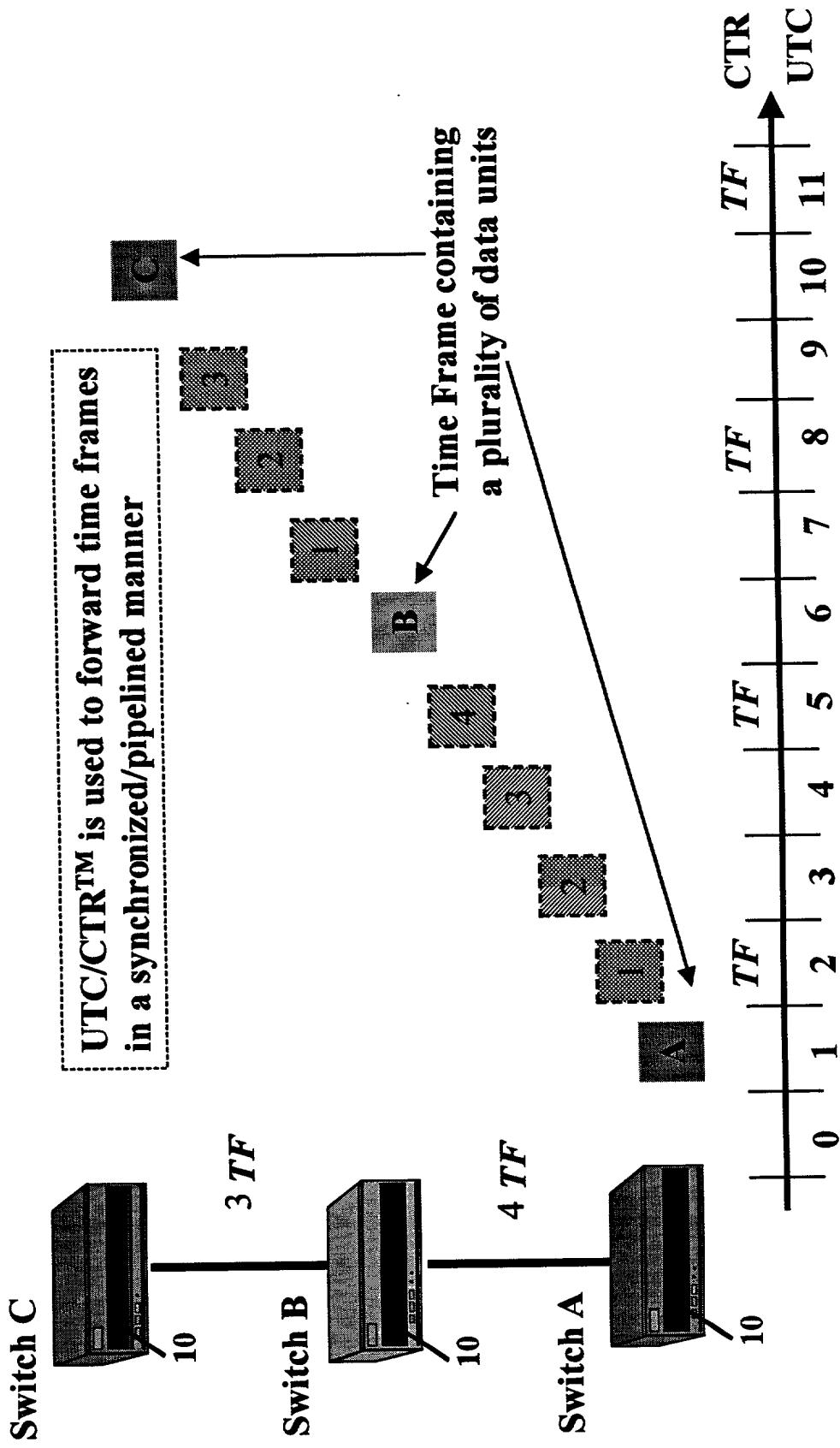


FIG. 4

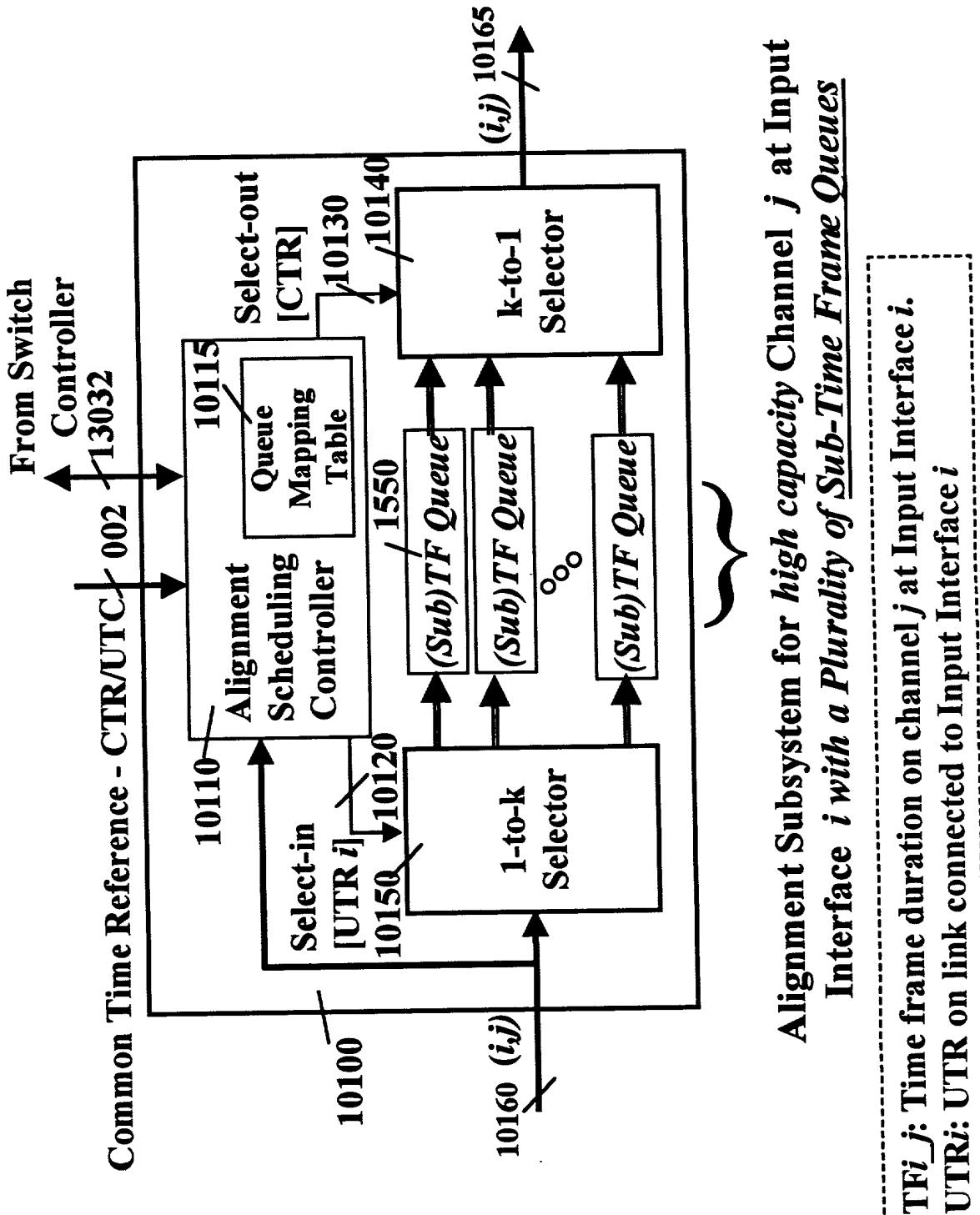
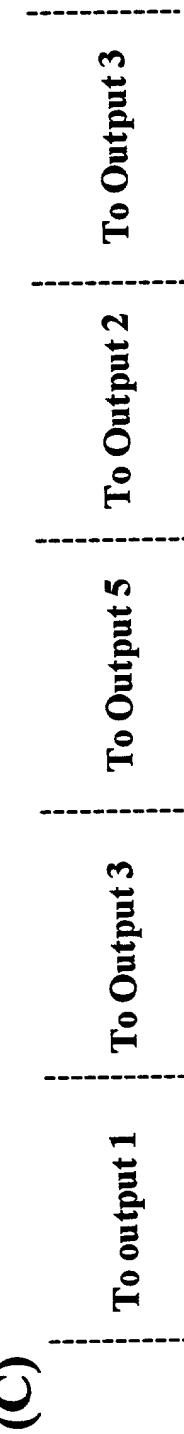
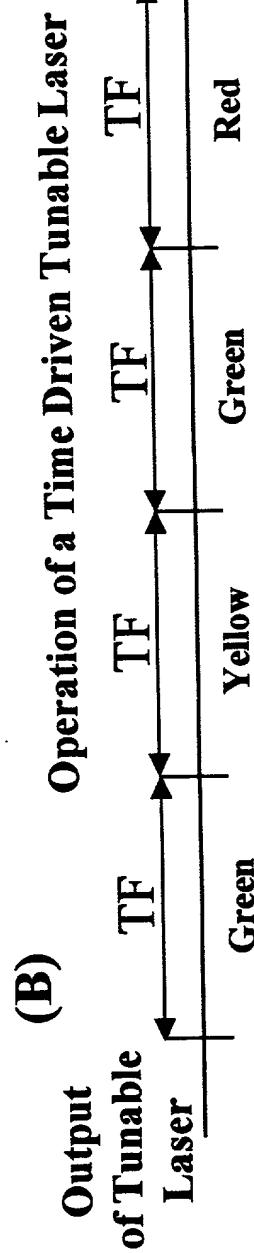
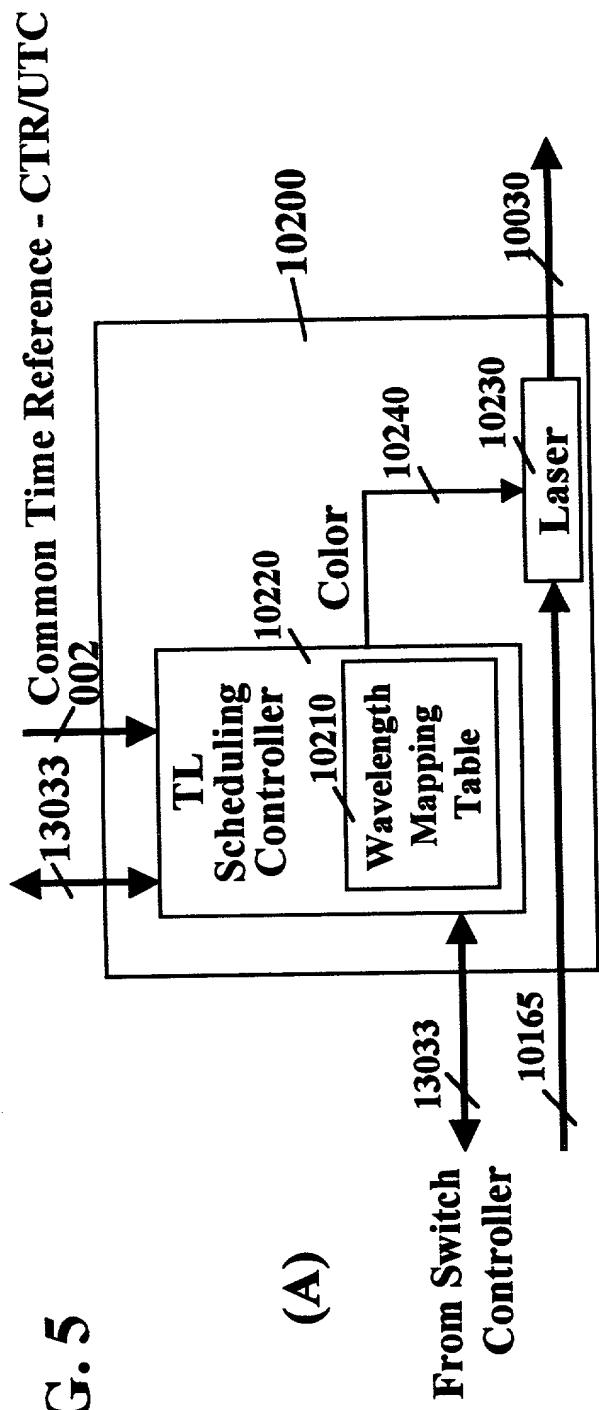


FIG. 5



Implication on a Wavelength Division De-multiplexer of a downstream switching system

FIG. 6

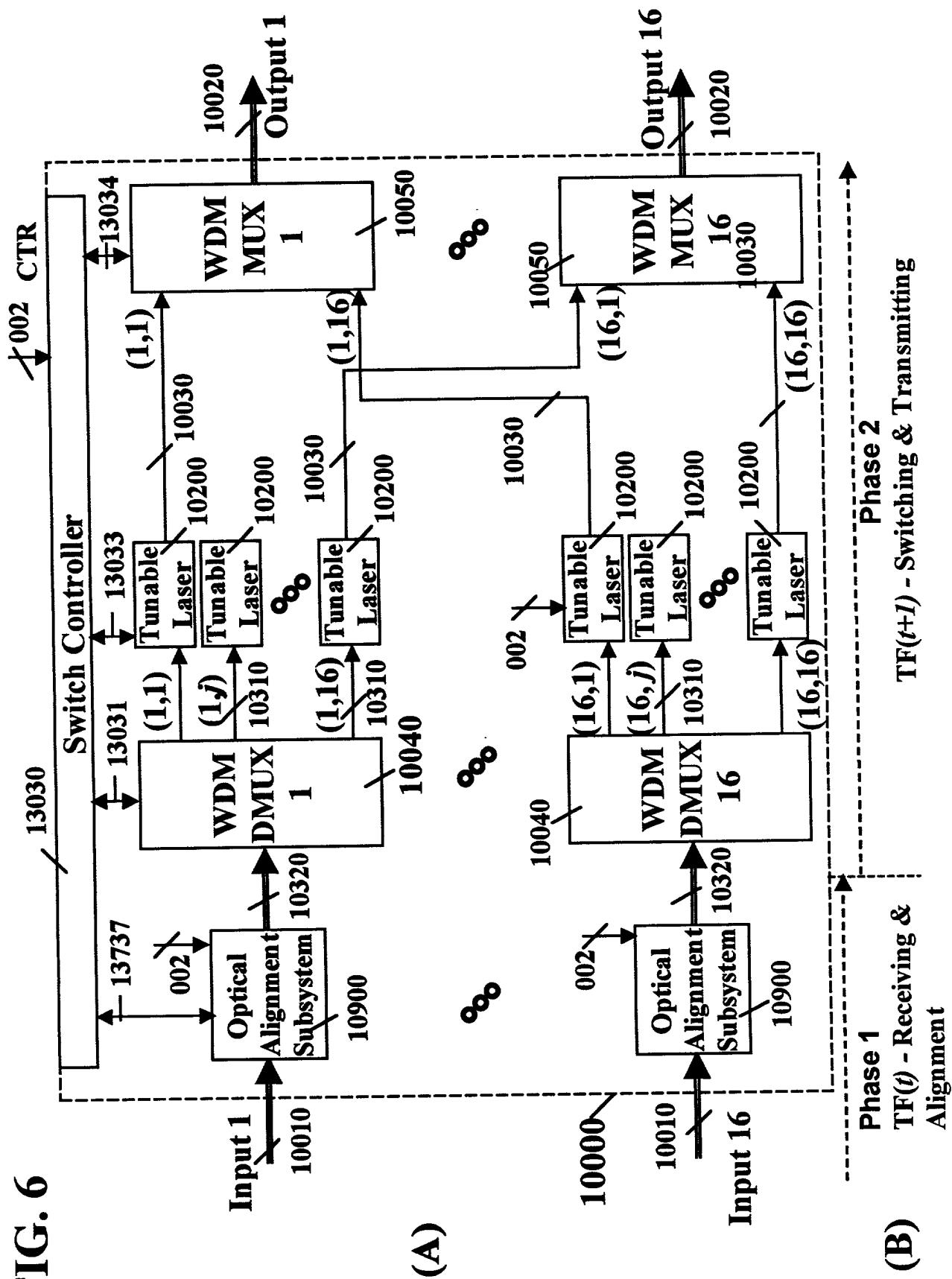


FIG. 7

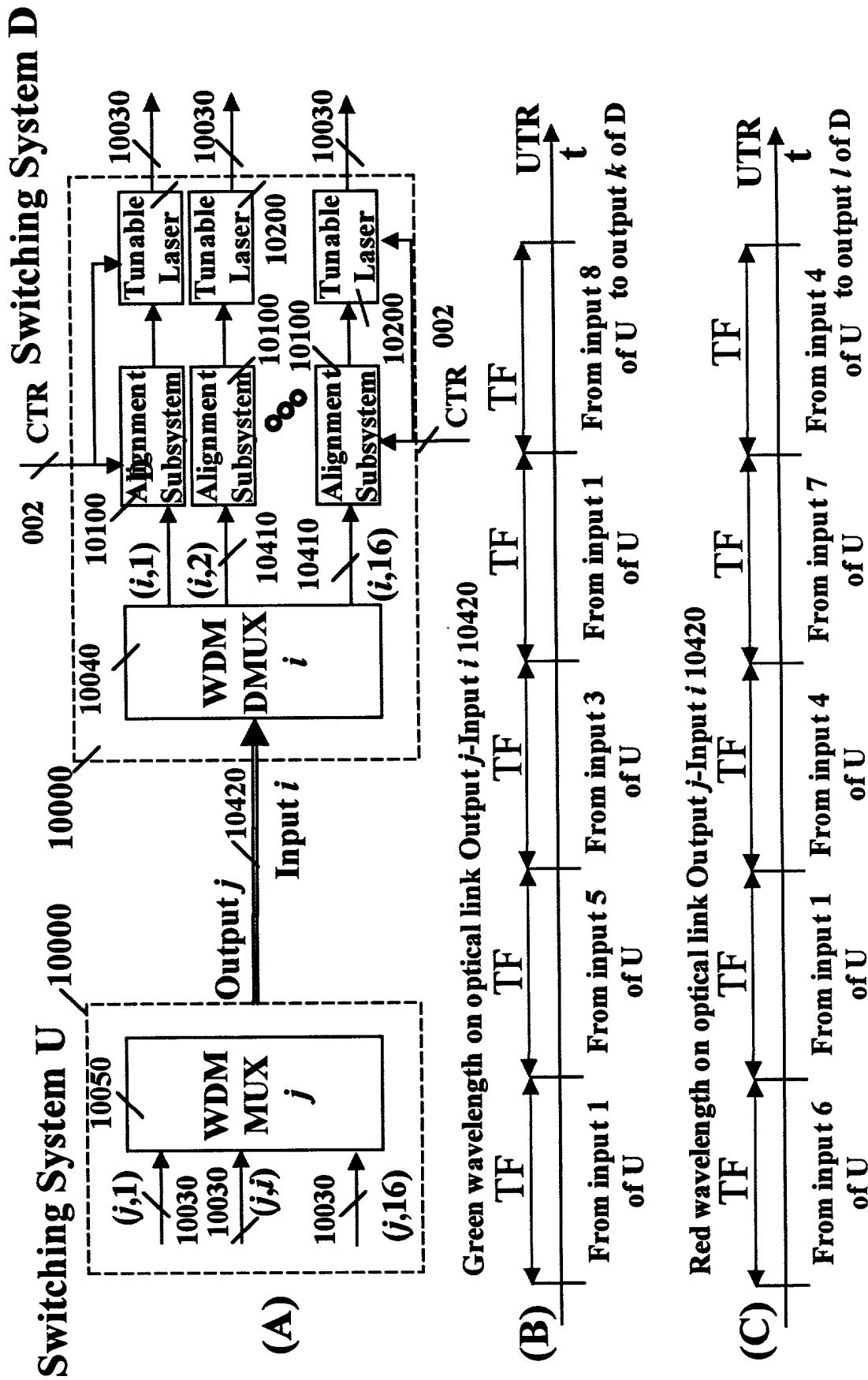


FIG. 8

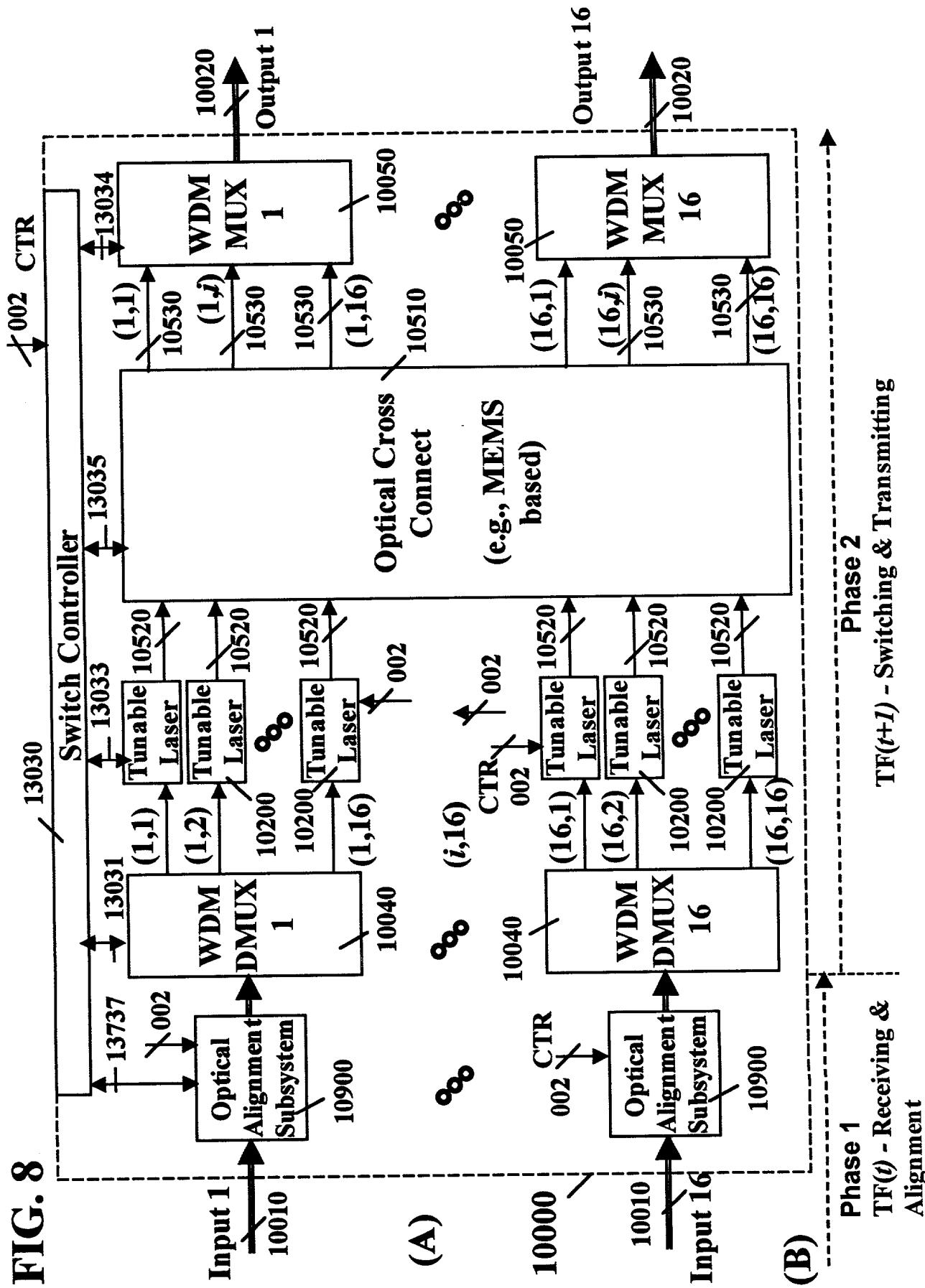


FIG. 9

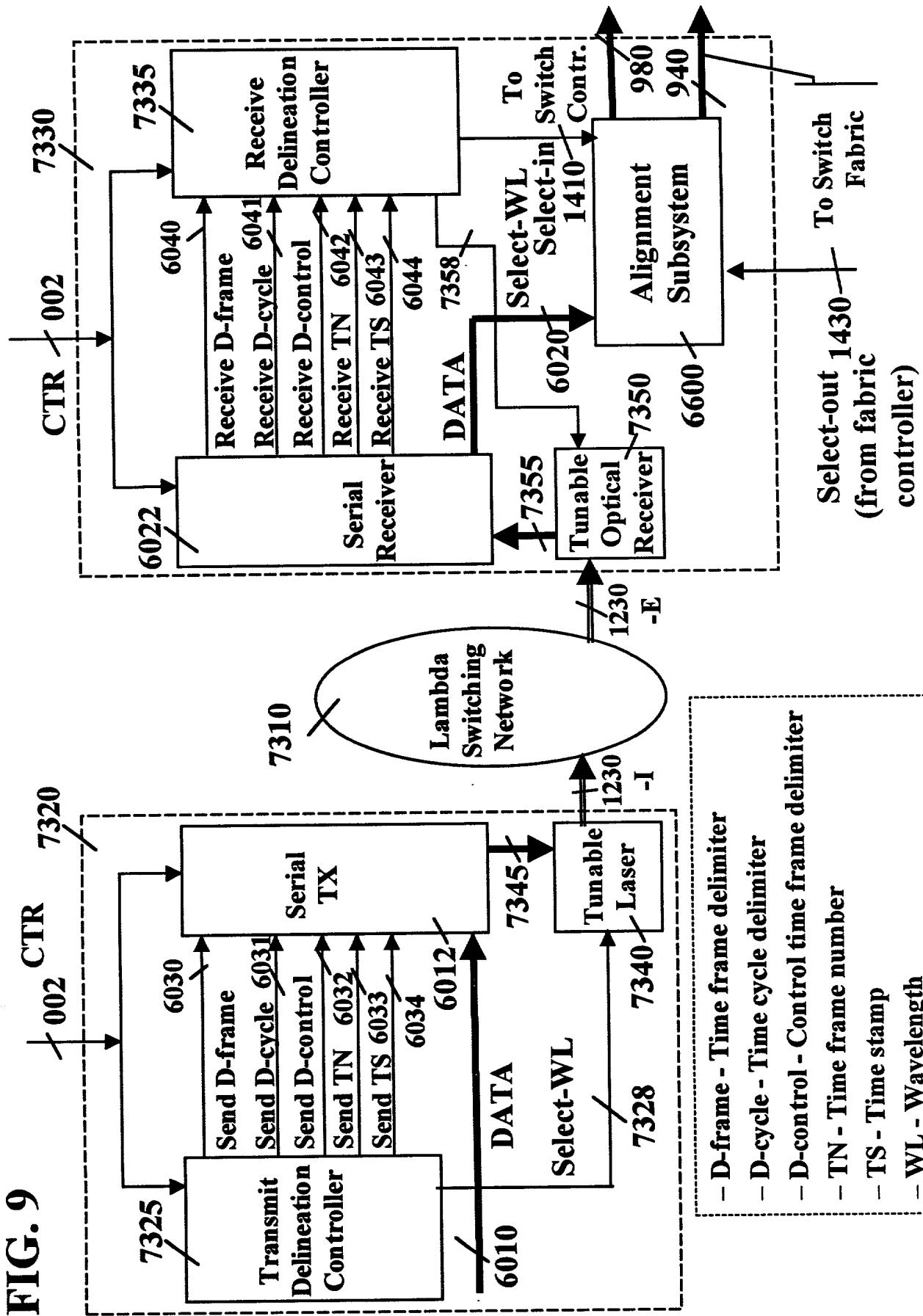


FIG. 10

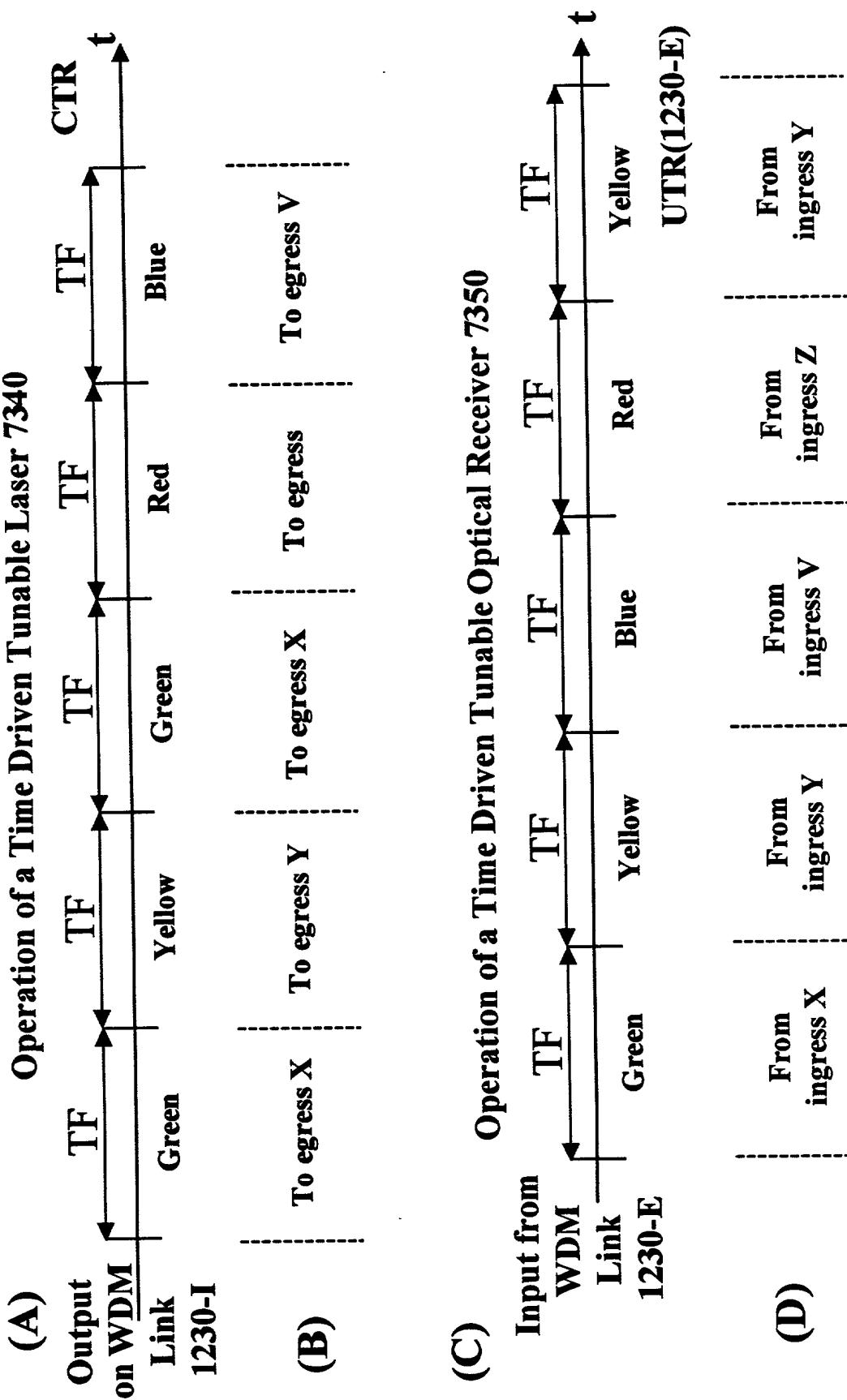


FIG. 11

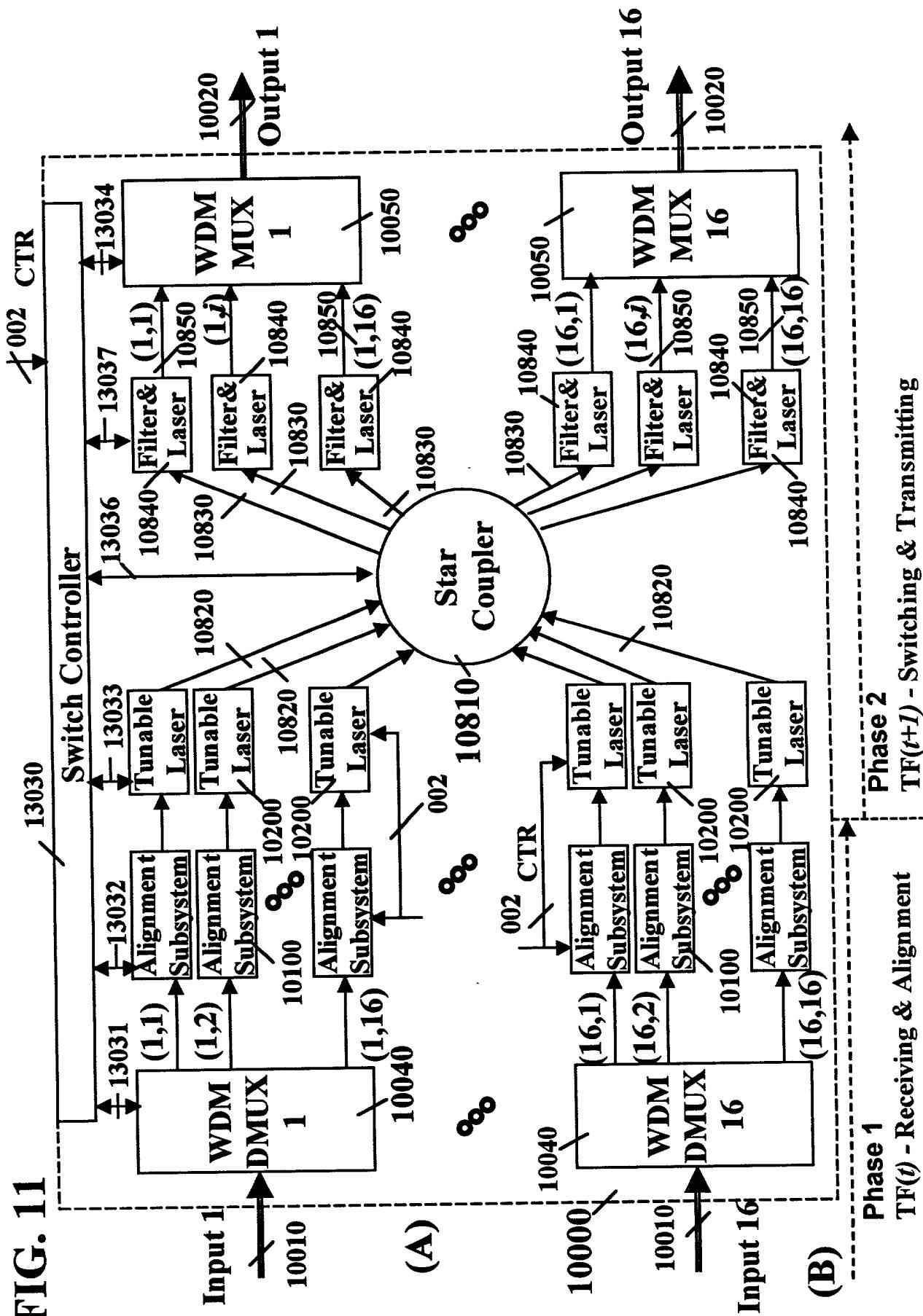


FIG. 12

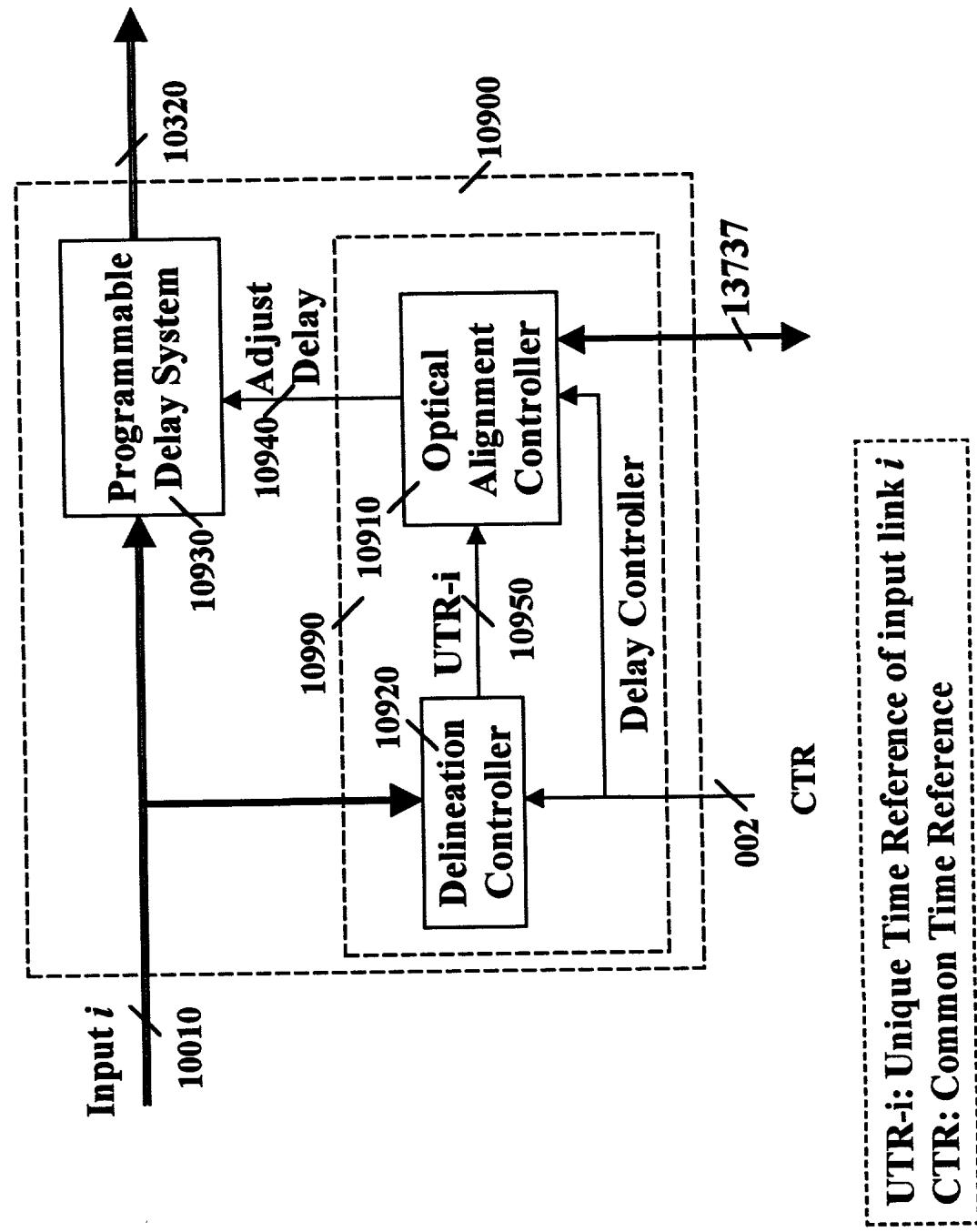


FIG. 13

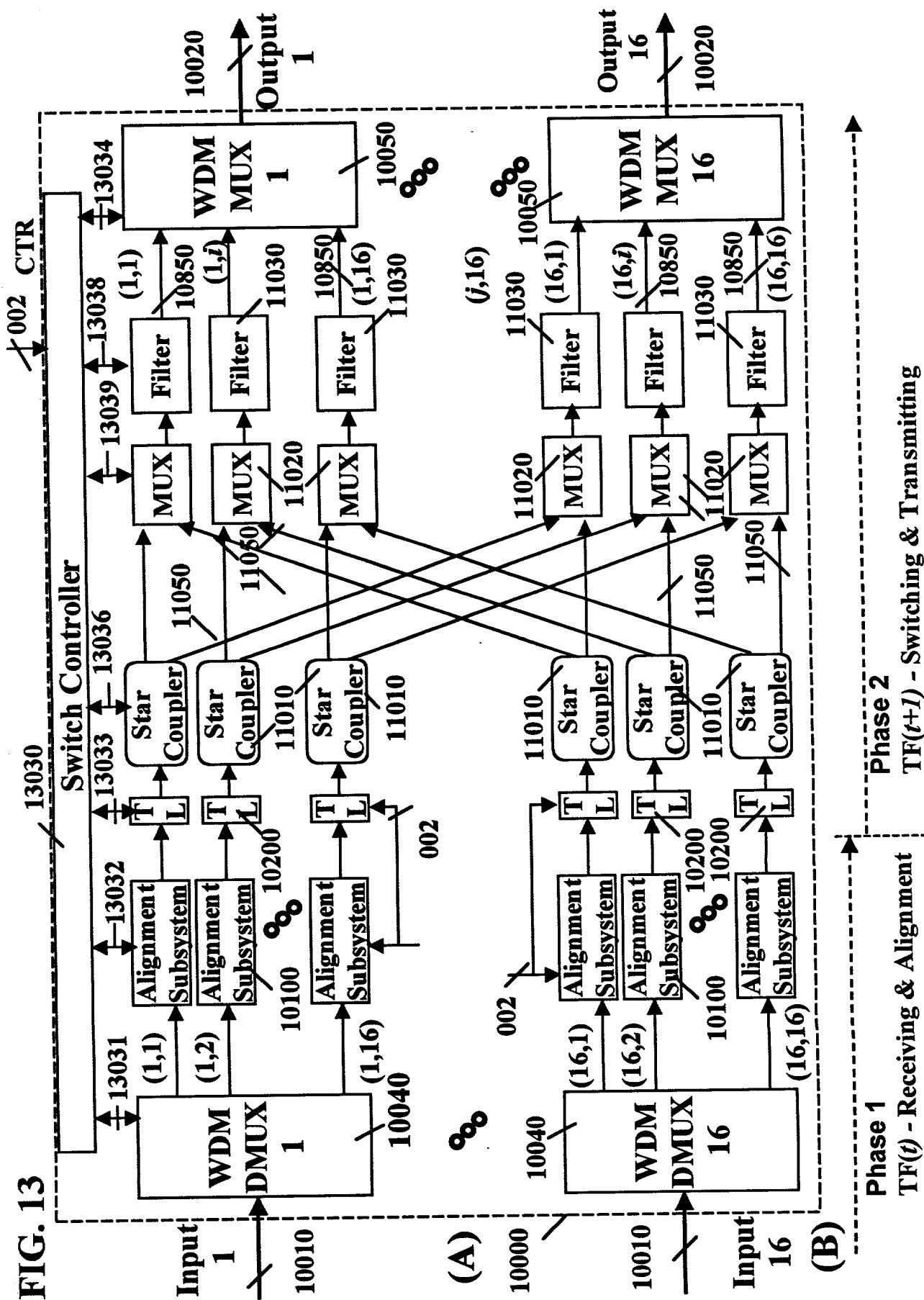


FIG. 14

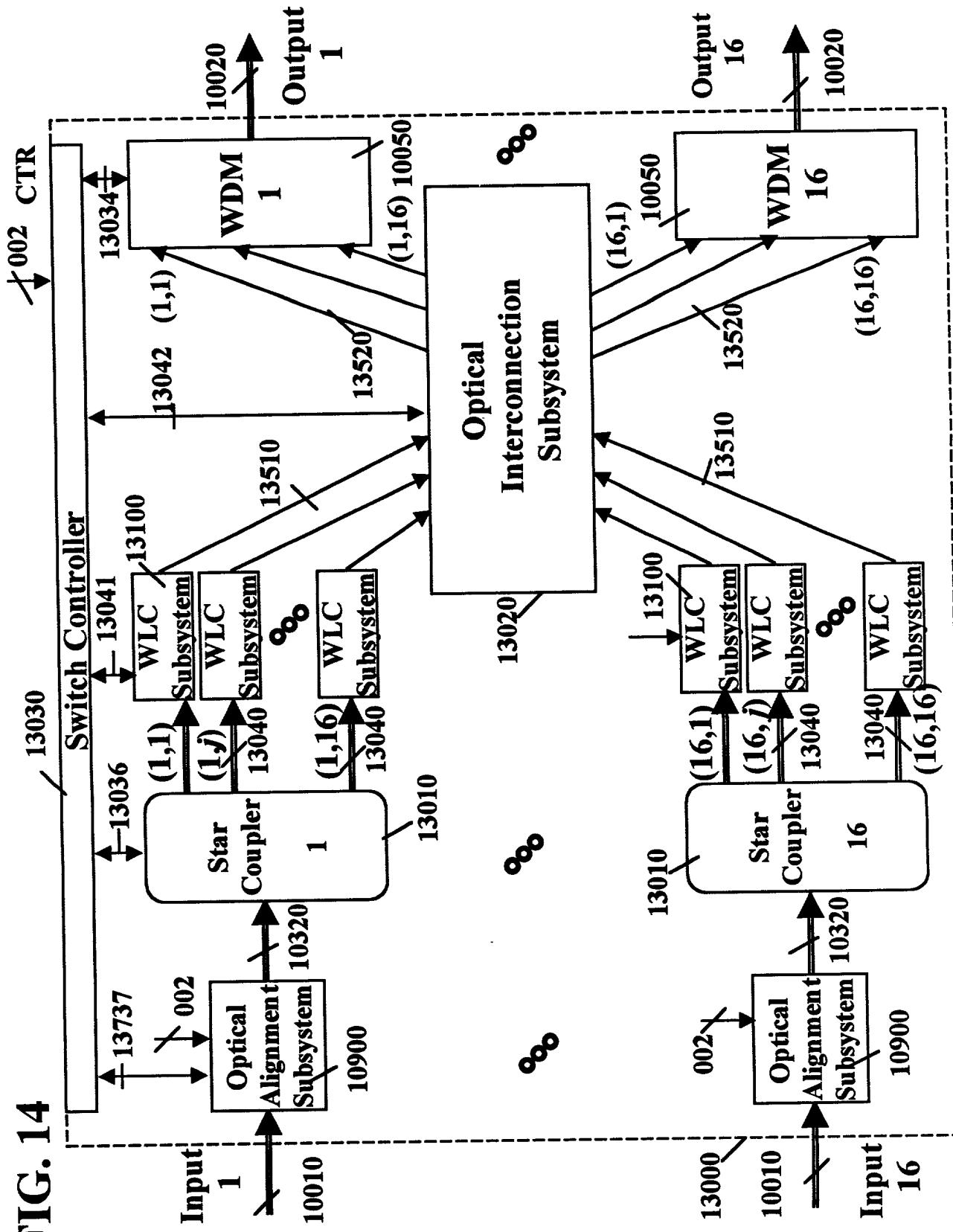
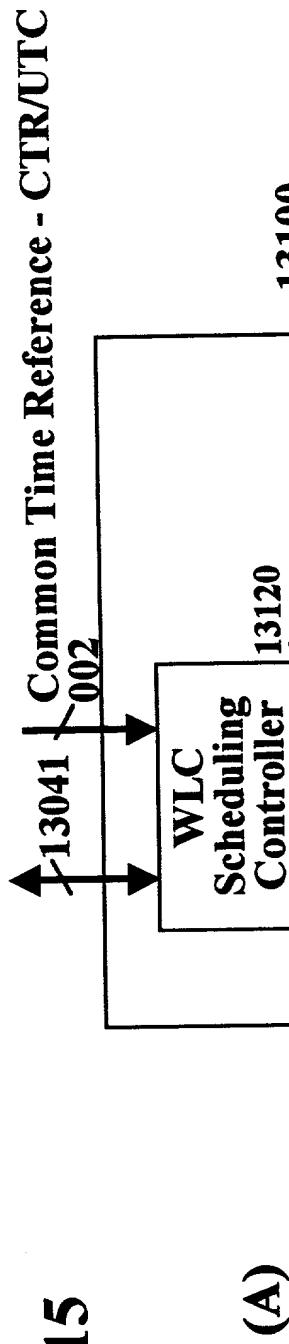
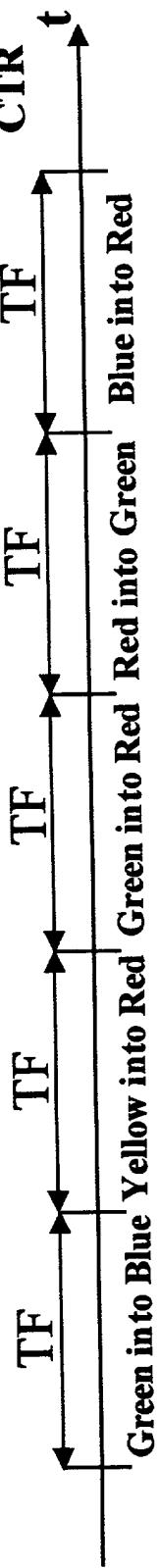


FIG. 15



(B)

Operation of a Time Driven Tunable Wavelength Conversion Subsystem 13150



Wavelengths received 13040 and emitted 13510 by
Tunable Wavelength Conversion Subsystem 13150

FIG. 16

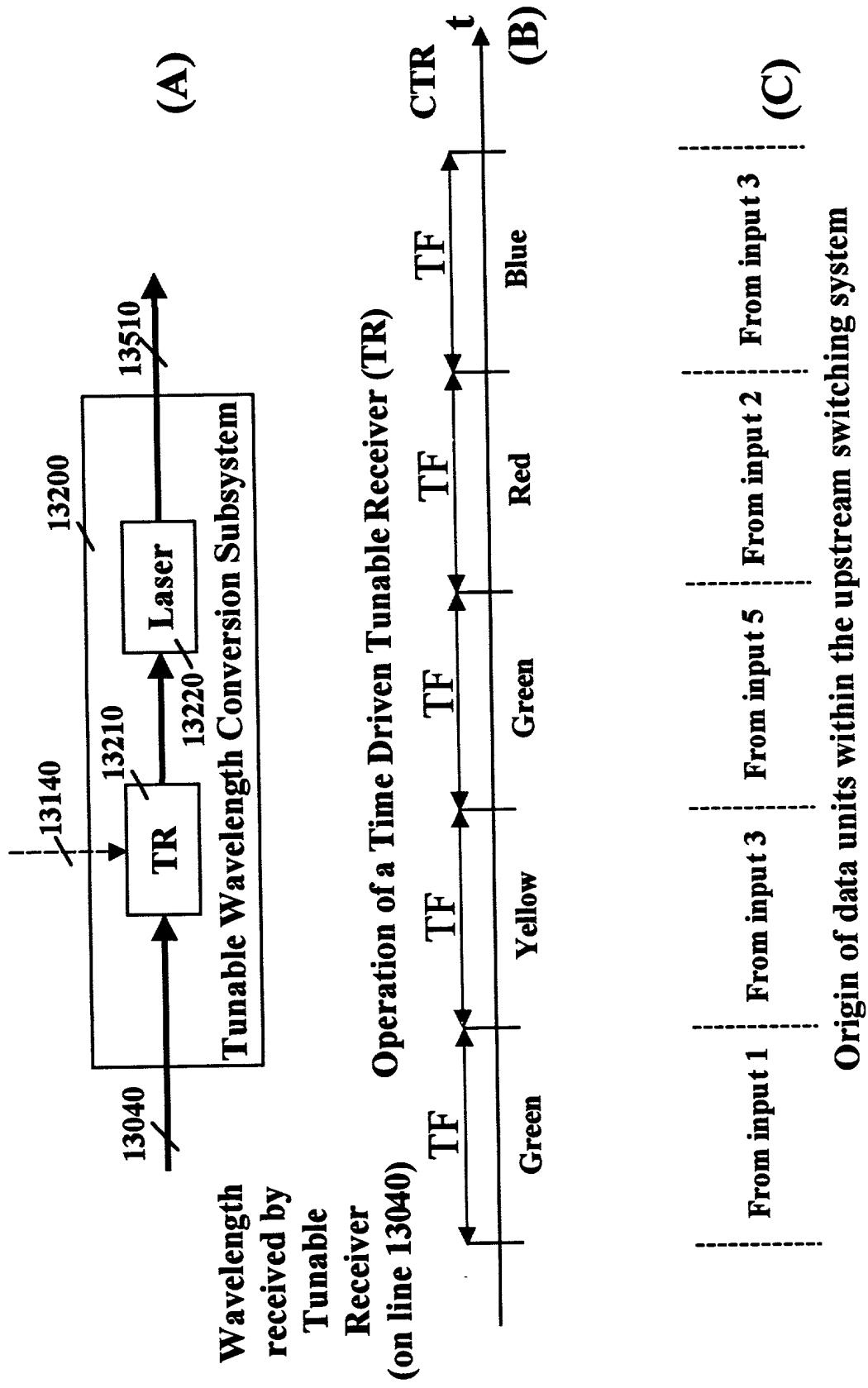


FIG. 17

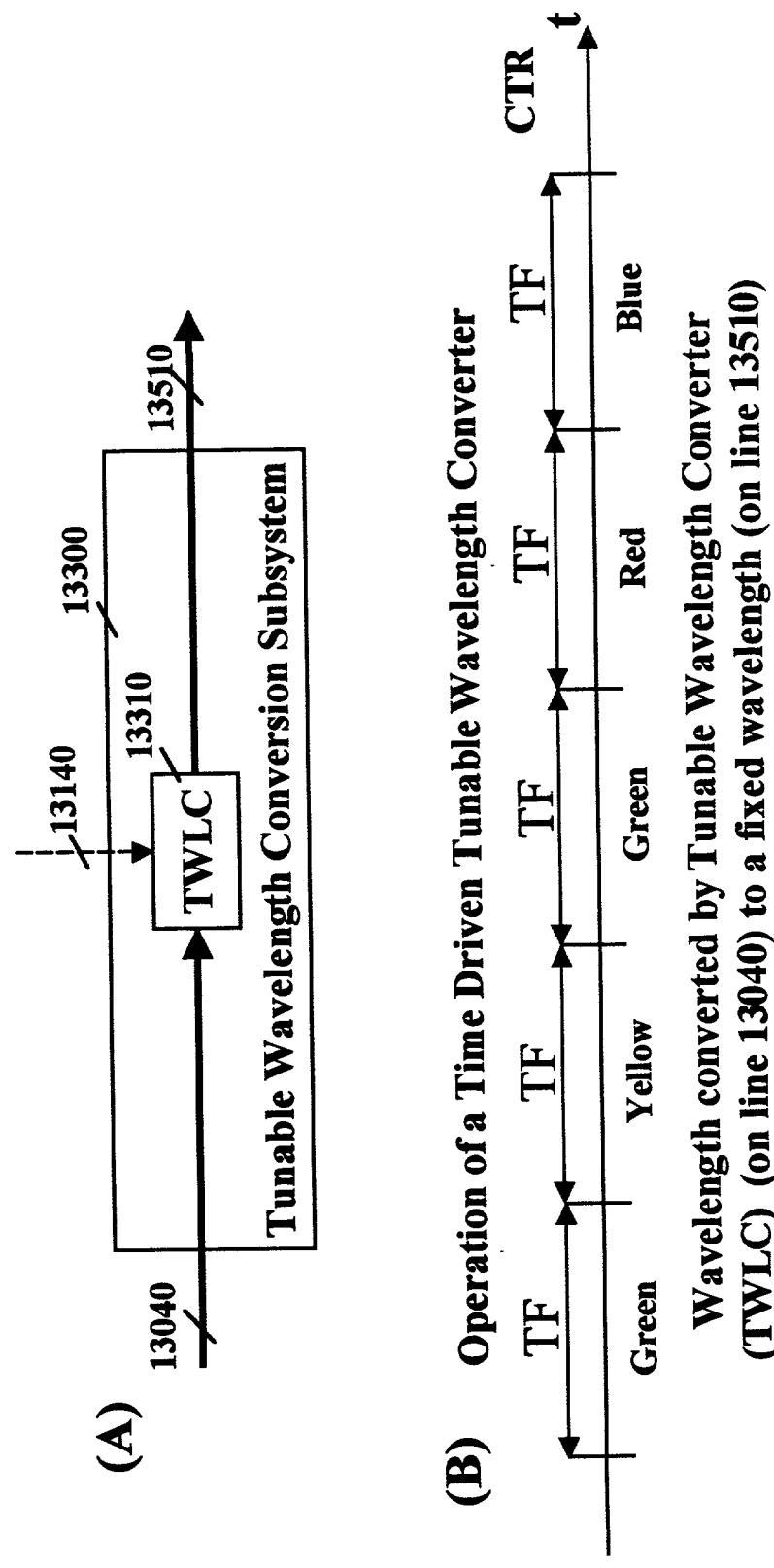


FIG. 18

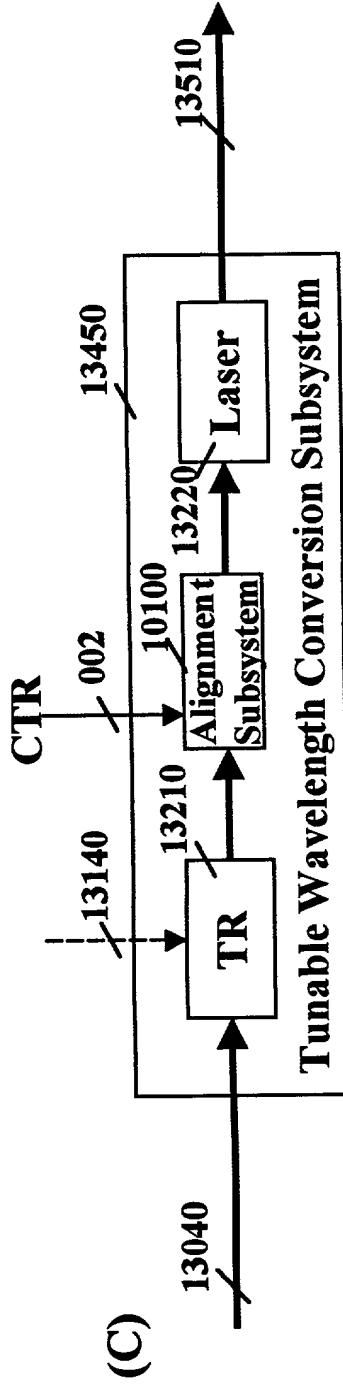
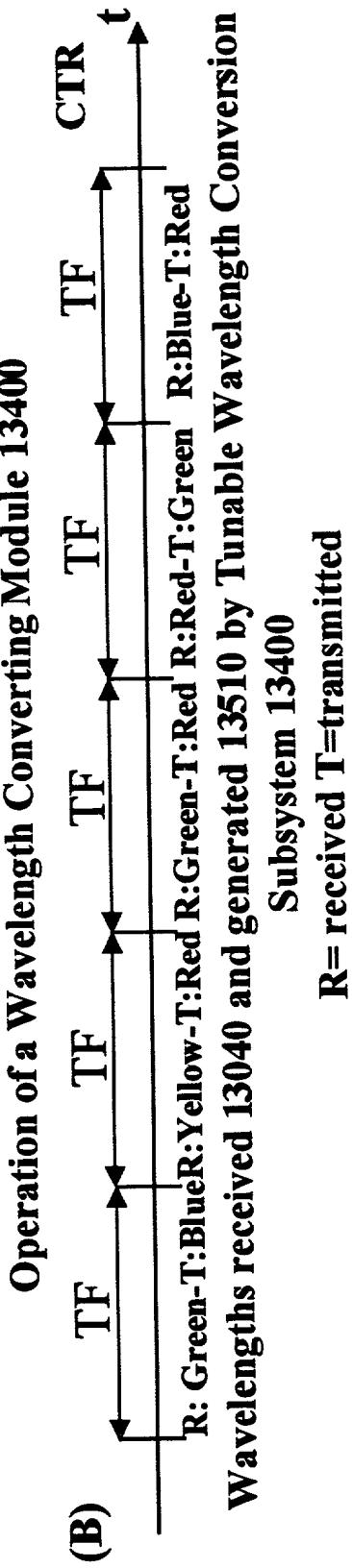
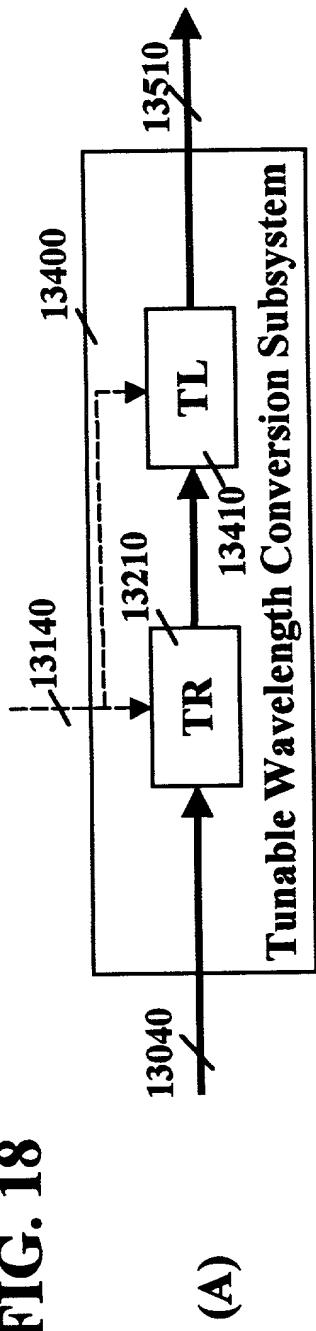


FIG. 19

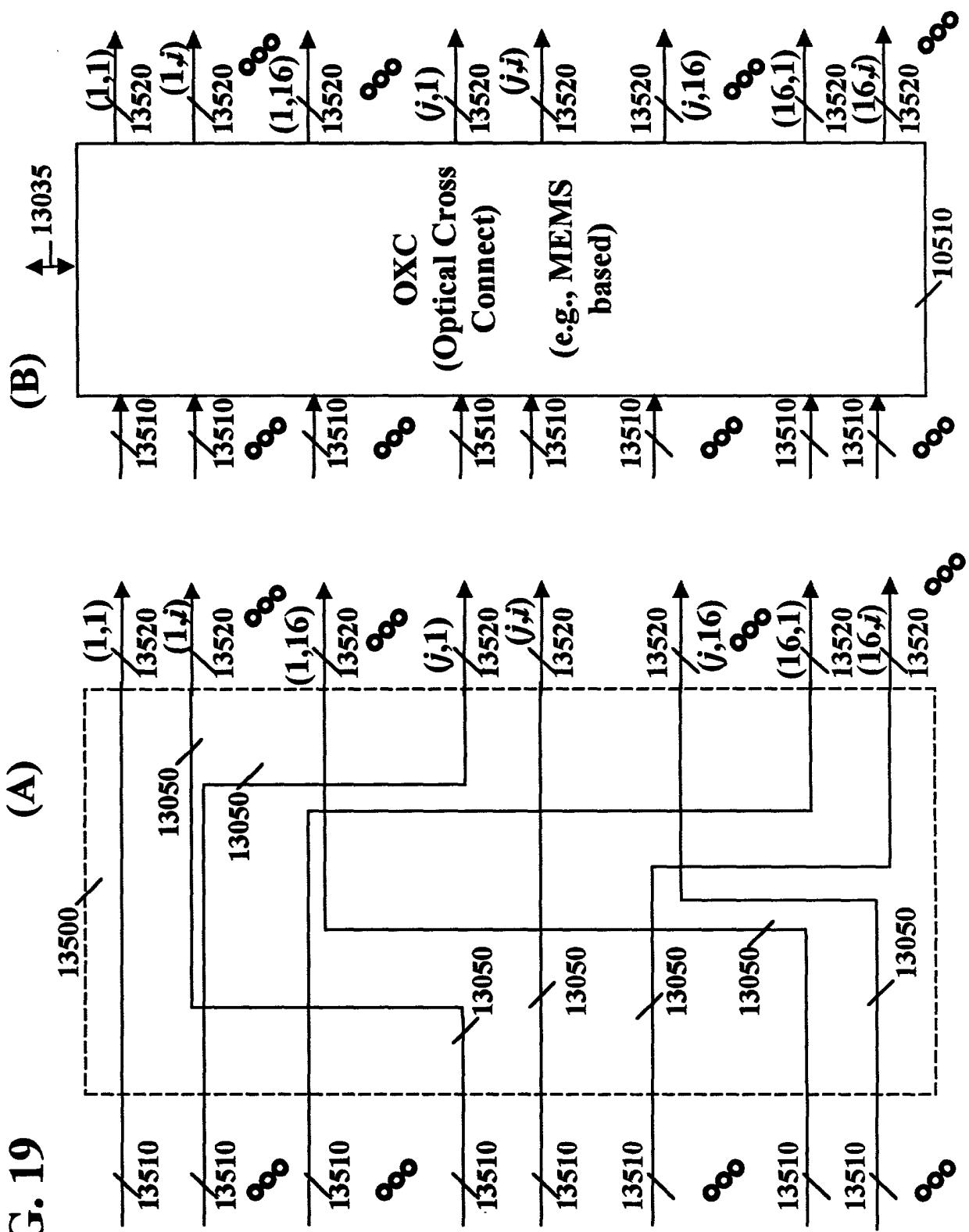


FIG. 20

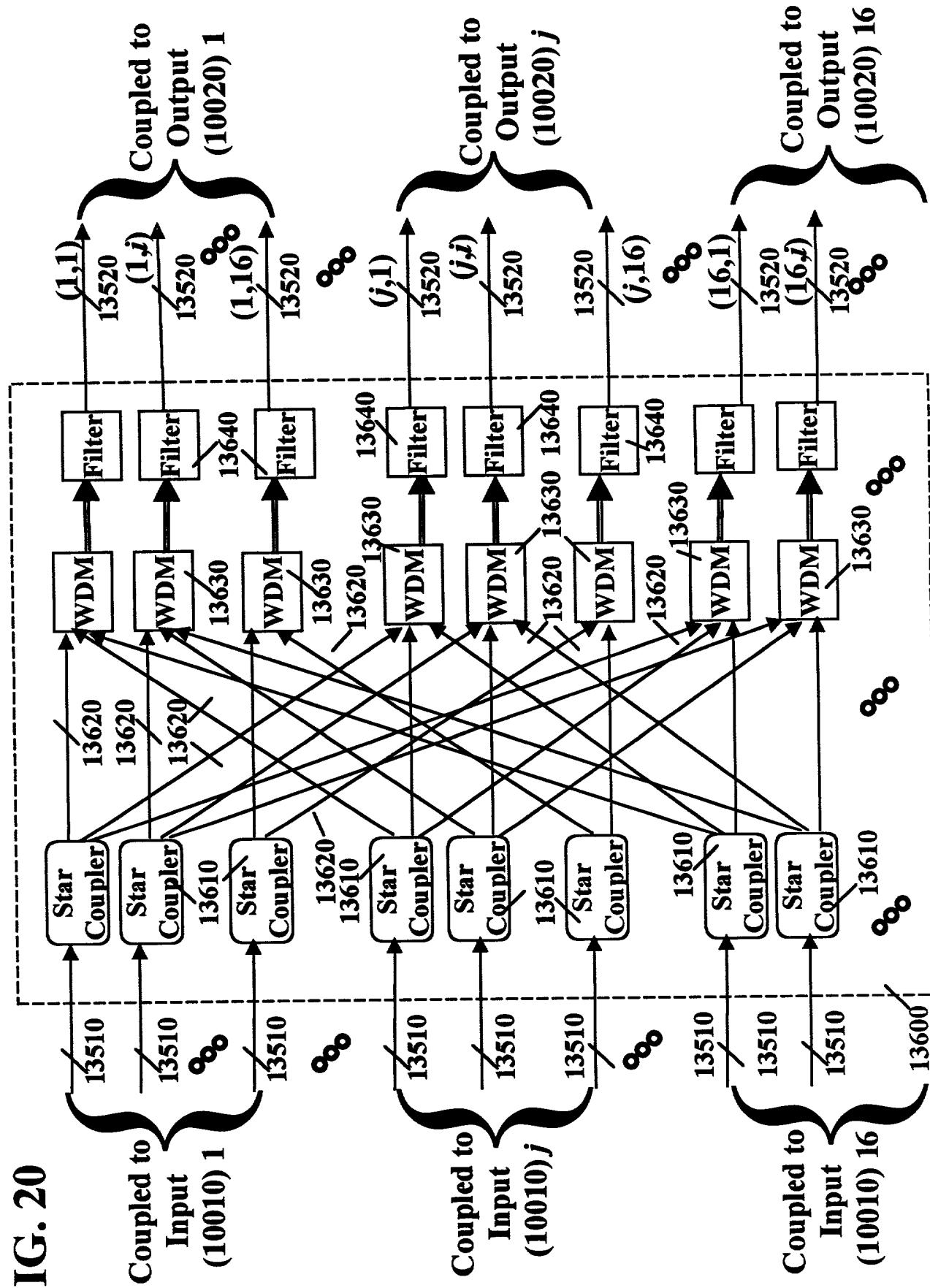


FIG. 21

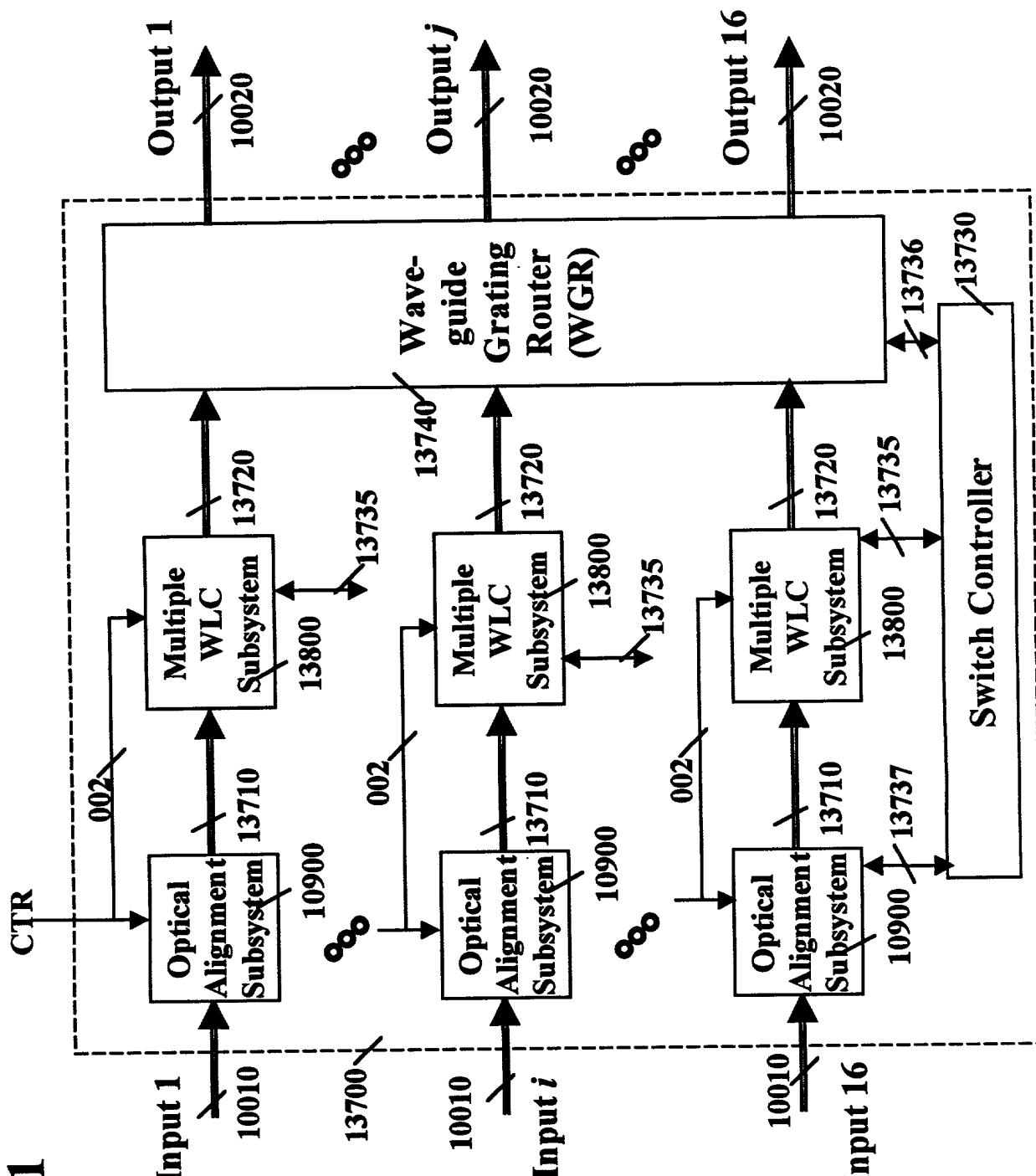
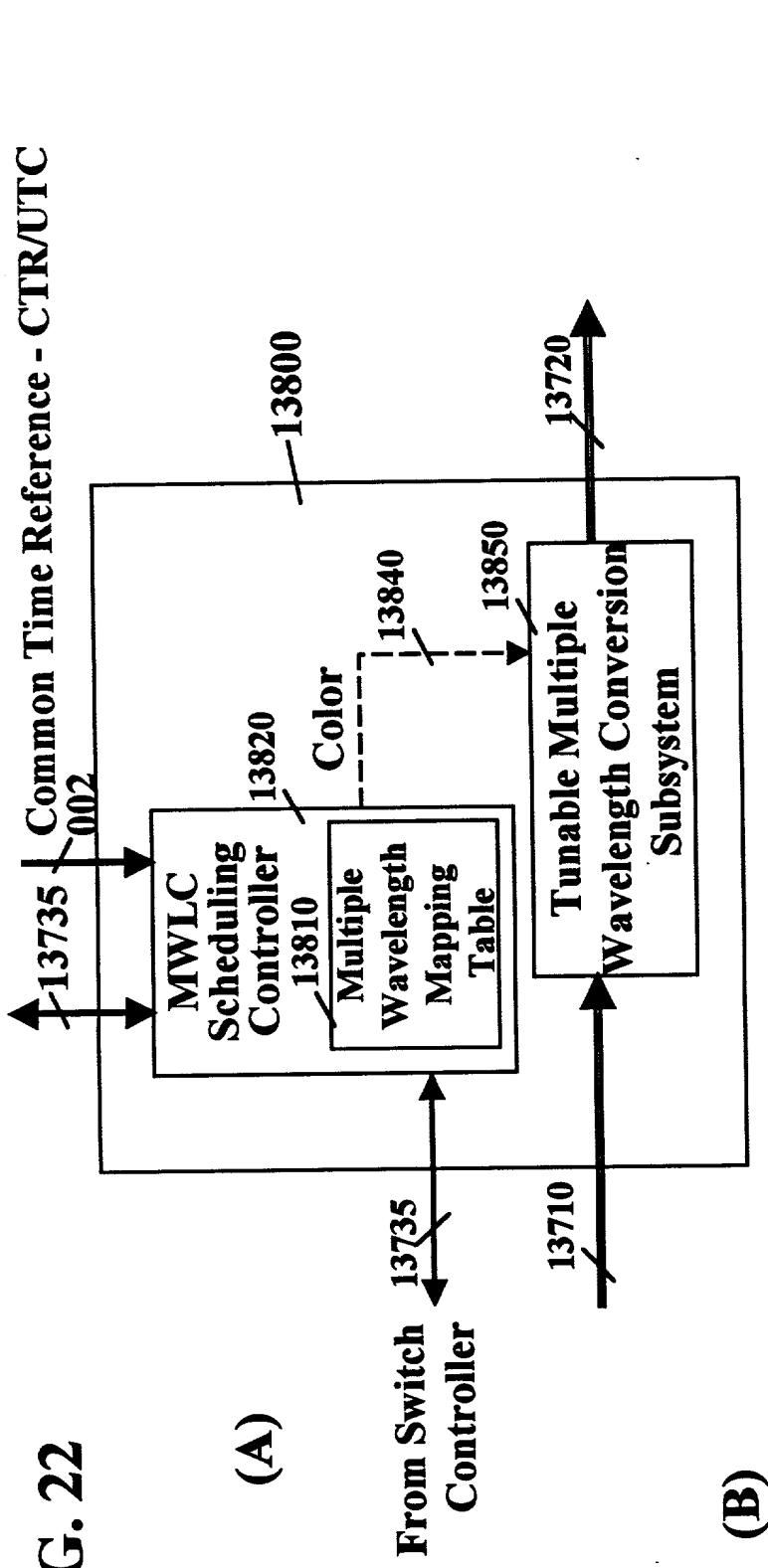
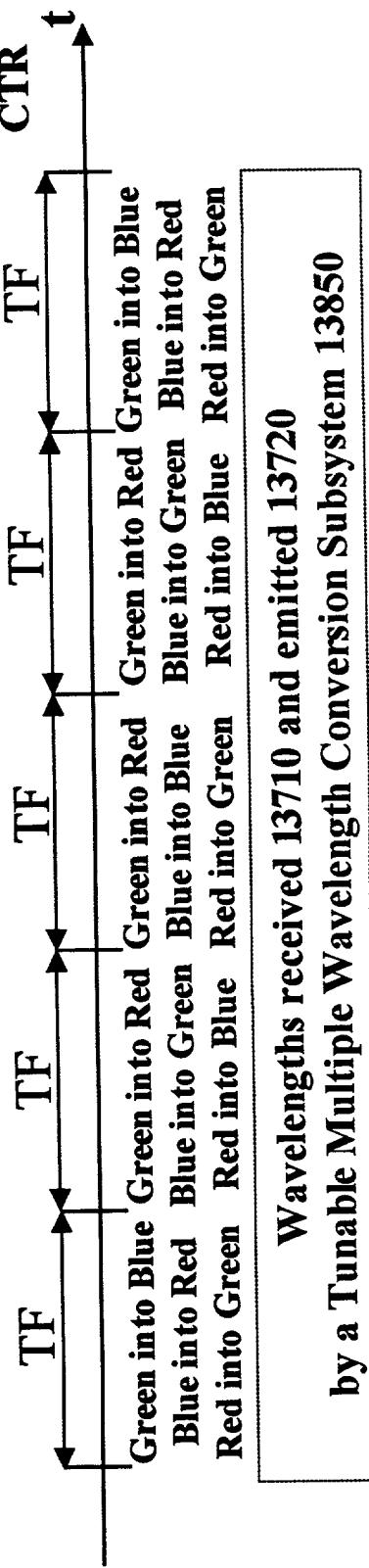


FIG. 22 Common Time Reference - CTR/UTC



Operation of a Time Driven Tunable Multiple Wavelength Conversion Subsystem 13850



Wavelengths received 13710 and emitted 13720 by a Tunable Multiple Wavelength Conversion Subsystem 13850

FIG. 23

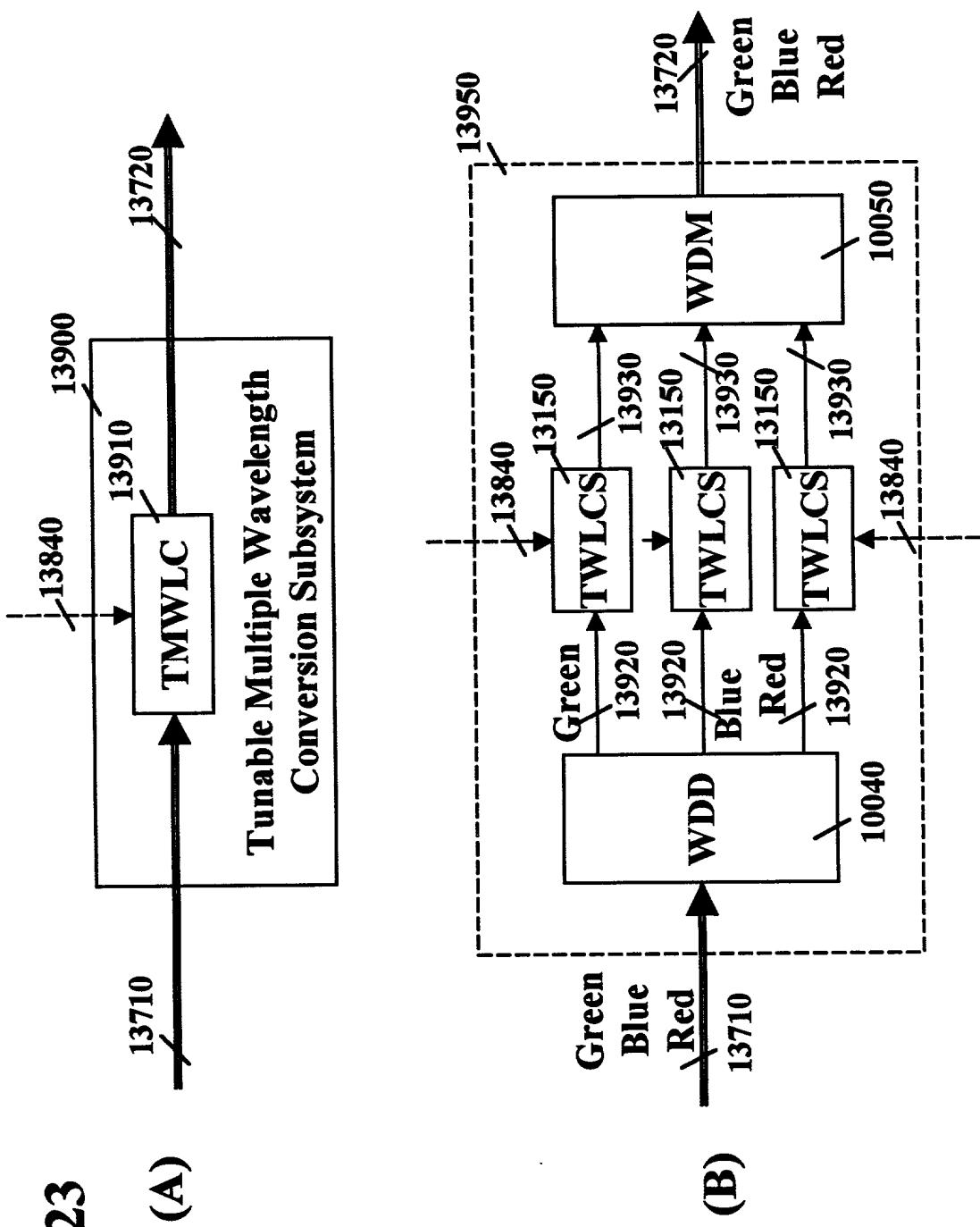


FIG. 24

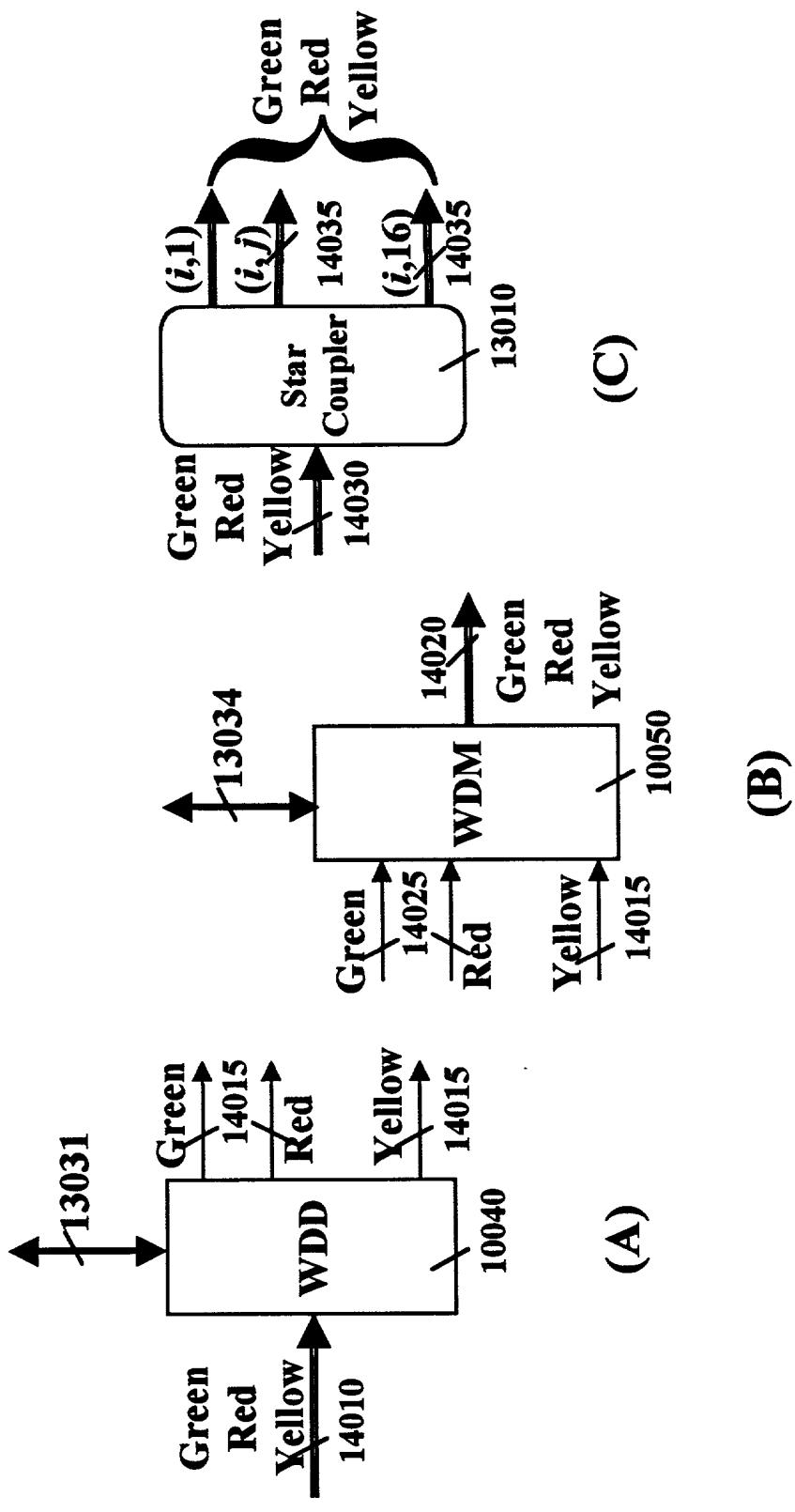


FIG. 25

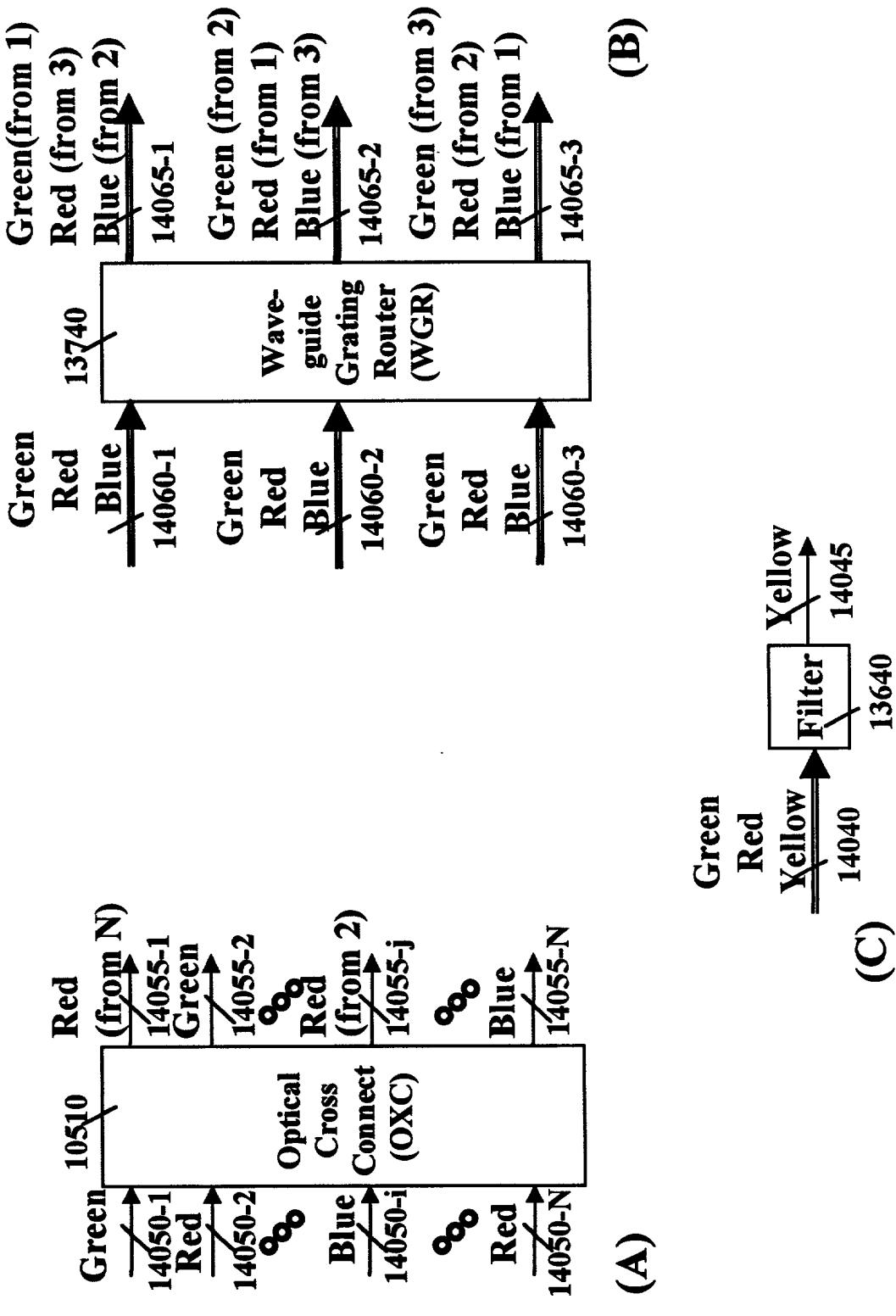


FIG. 26

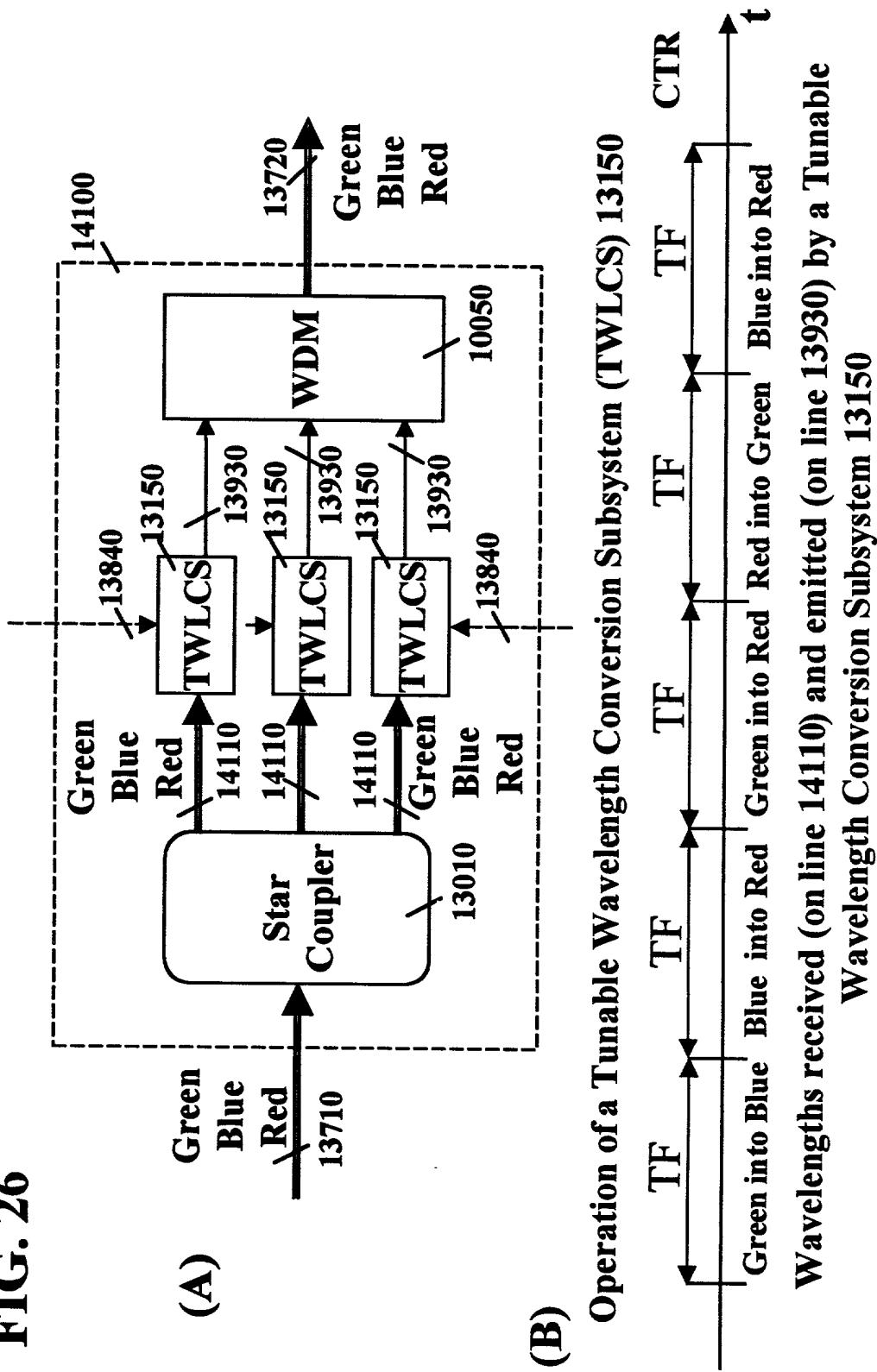


FIG. 27

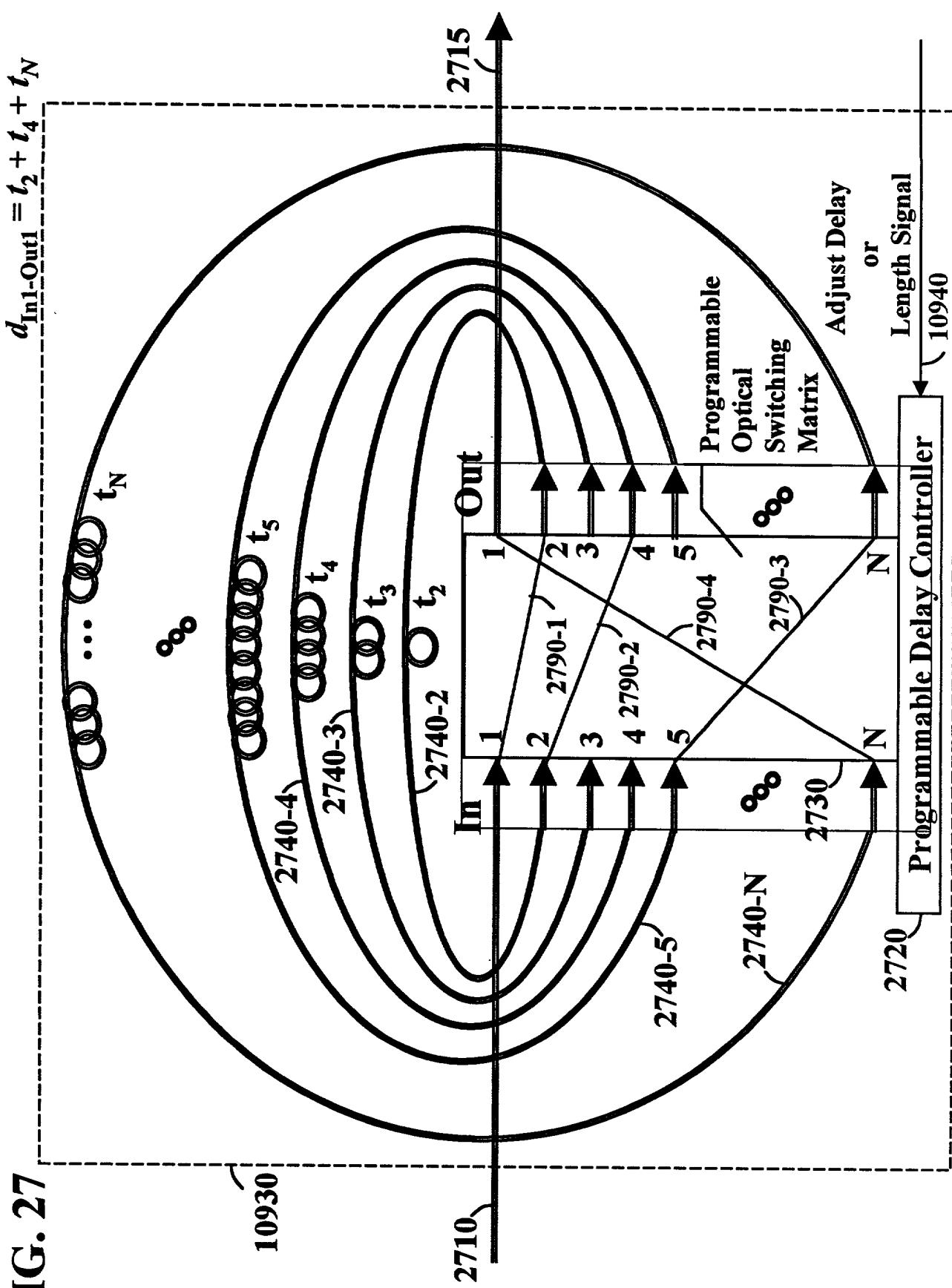


FIG. 28

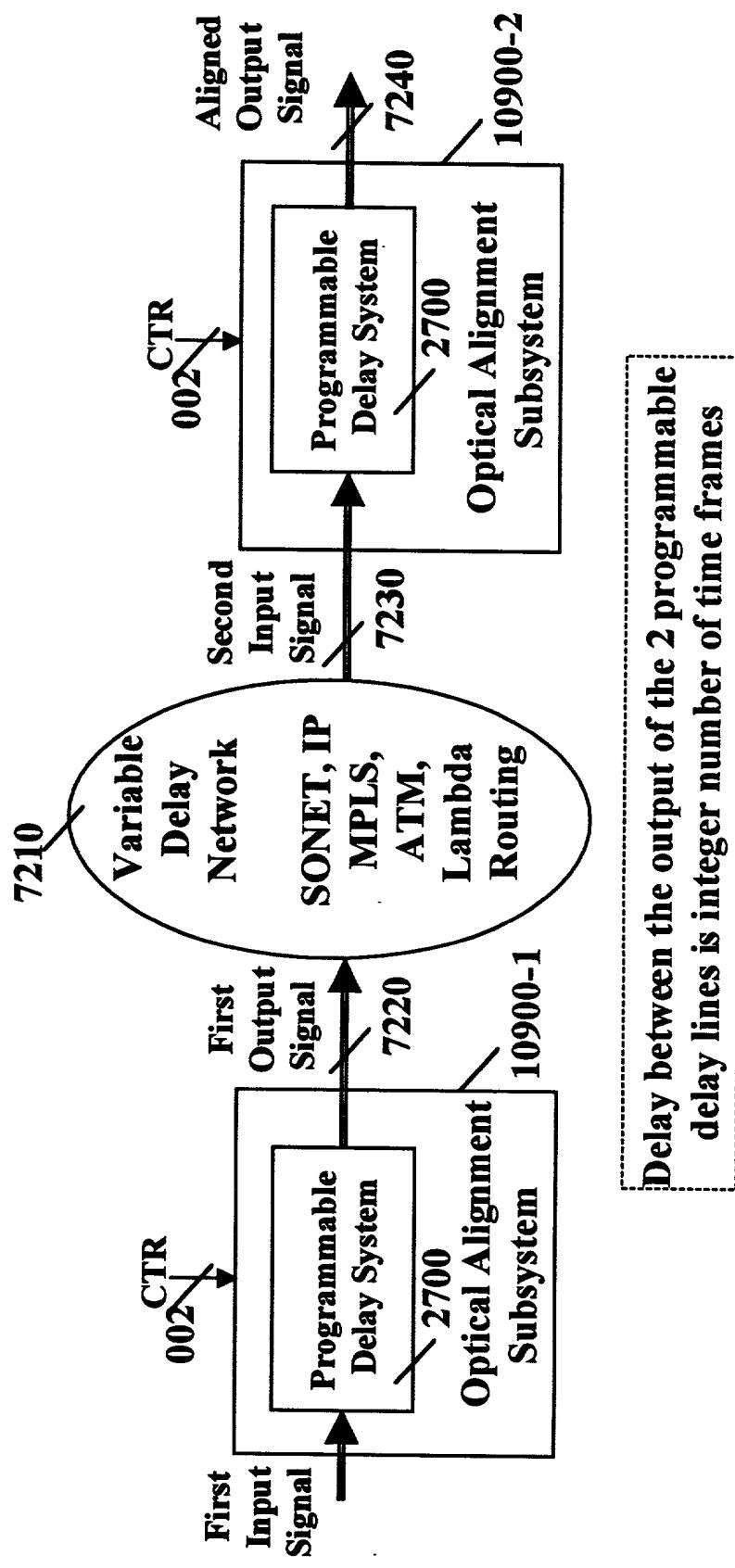


FIG. 29

TF Alignment of UTR(*i*) to UTC - with three input queues - principle of operation:

The same queue is not used simultaneously for:

1. Receiving data packets from the serial link, and
2. Forwarding data packets to the switch

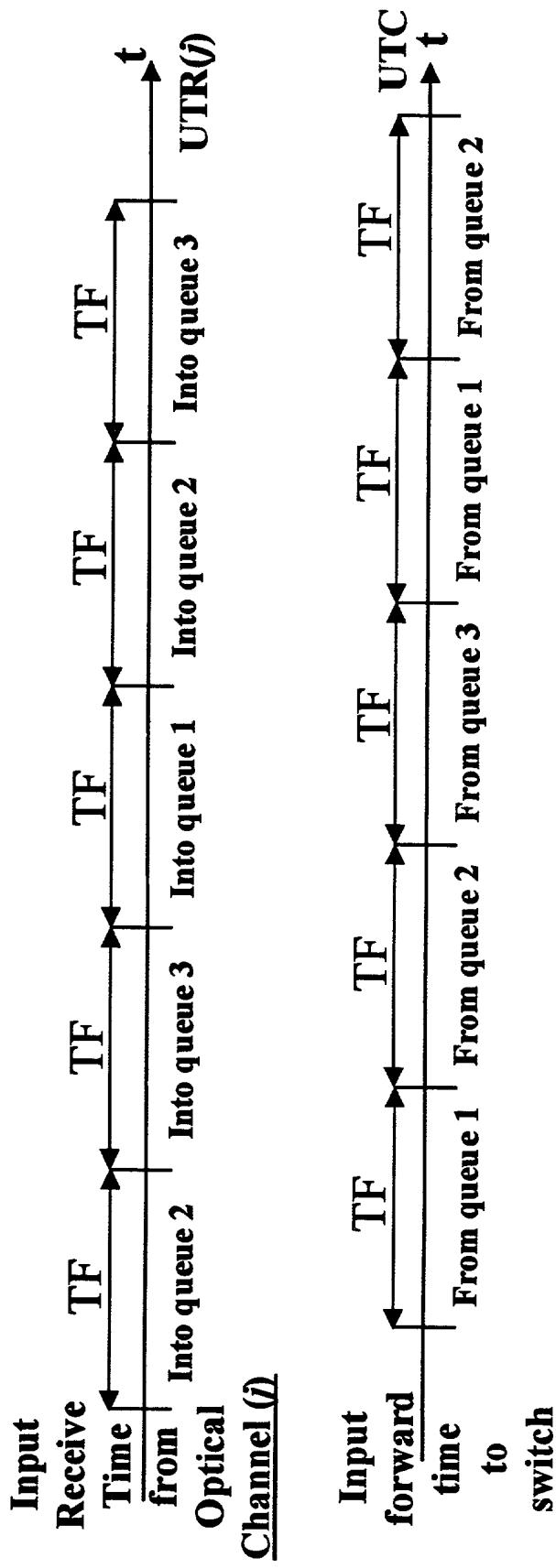


FIG. 30

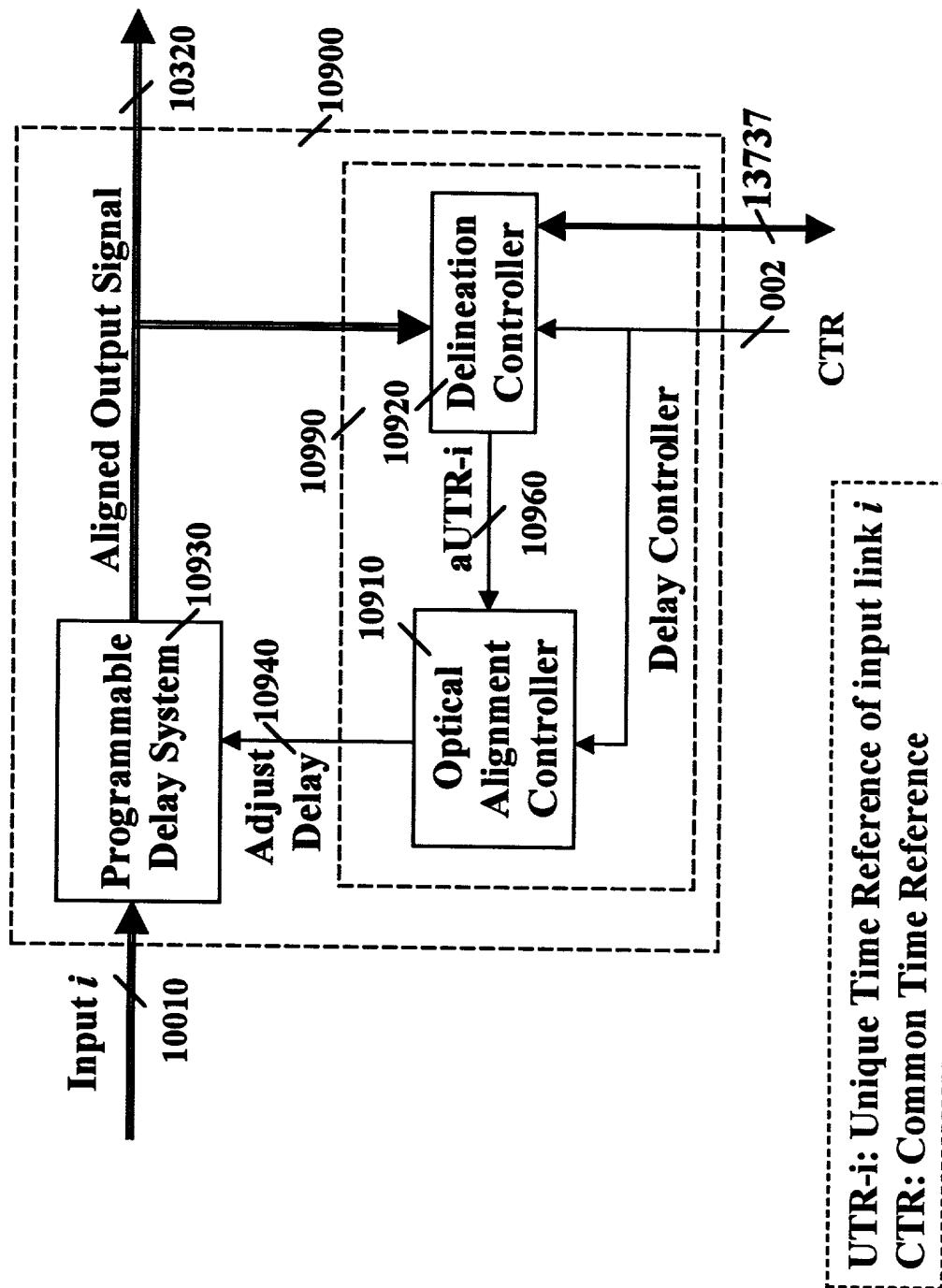


FIG. 31

POSM: Programmable Optical Switching Matrix

$$d_{\text{In1-Out1}} = t_1 + 2 \cdot t_2 + 3 \cdot t_N$$

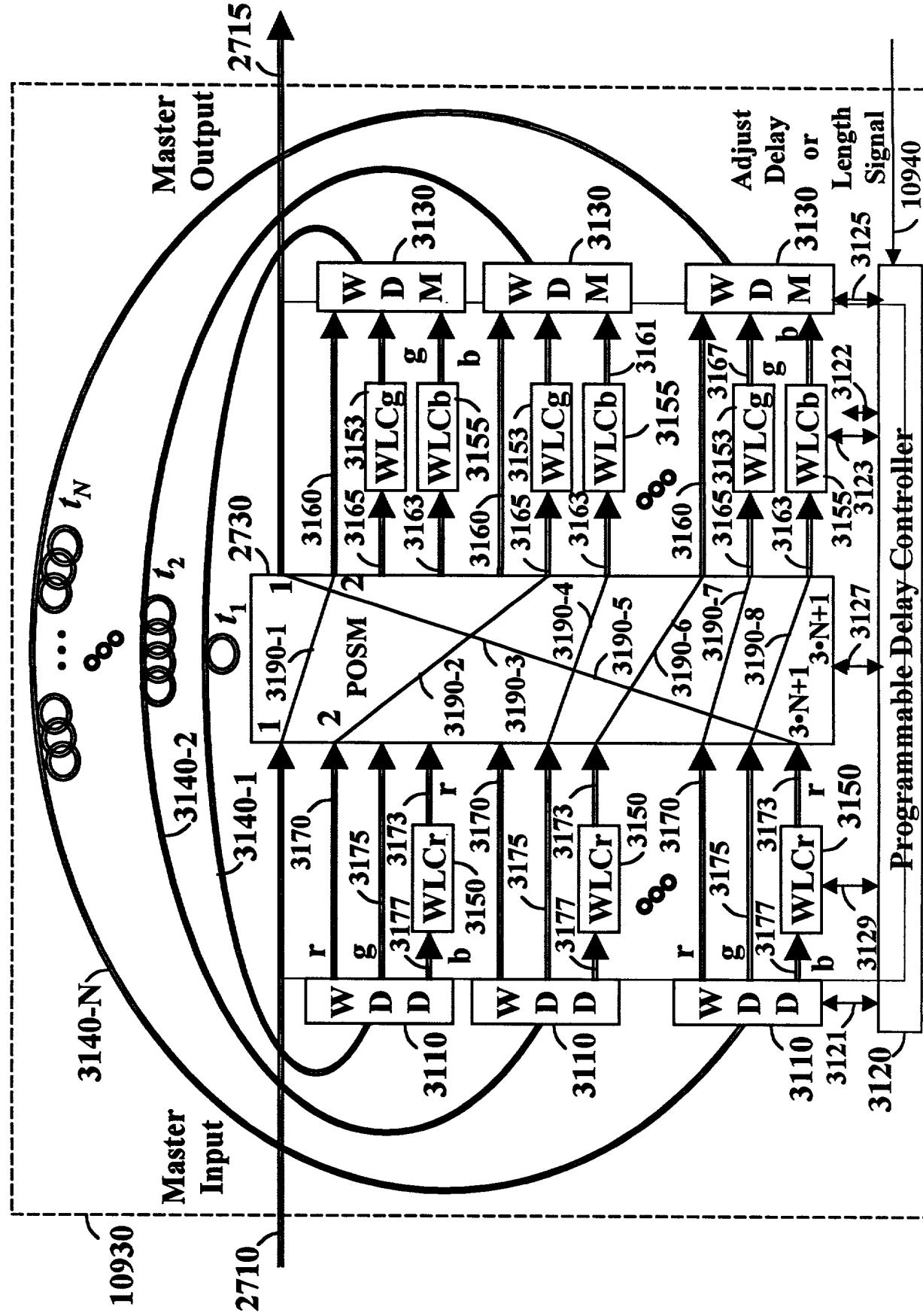


FIG. 32

POSM: Programmable Optical Switching Matrix

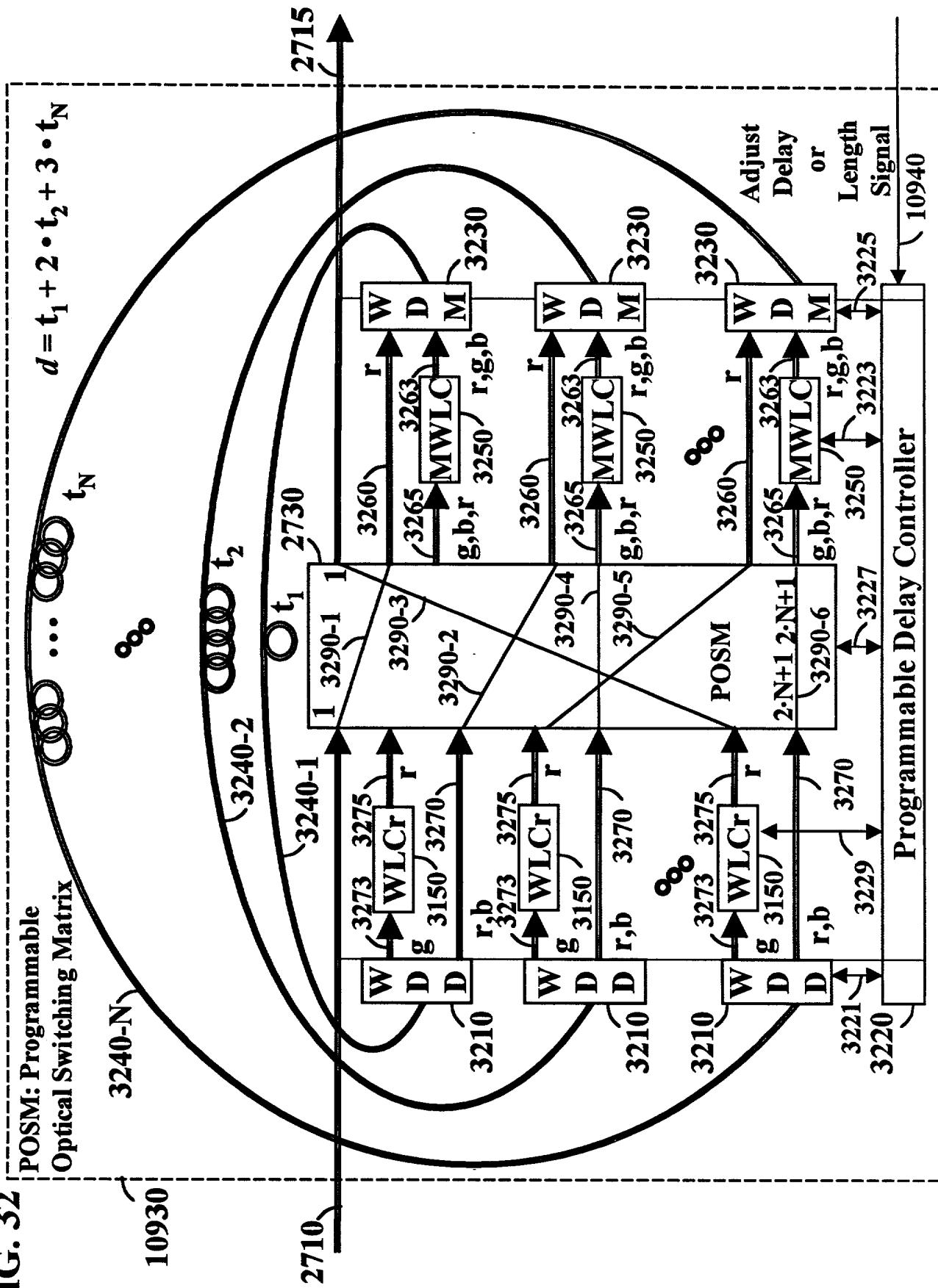
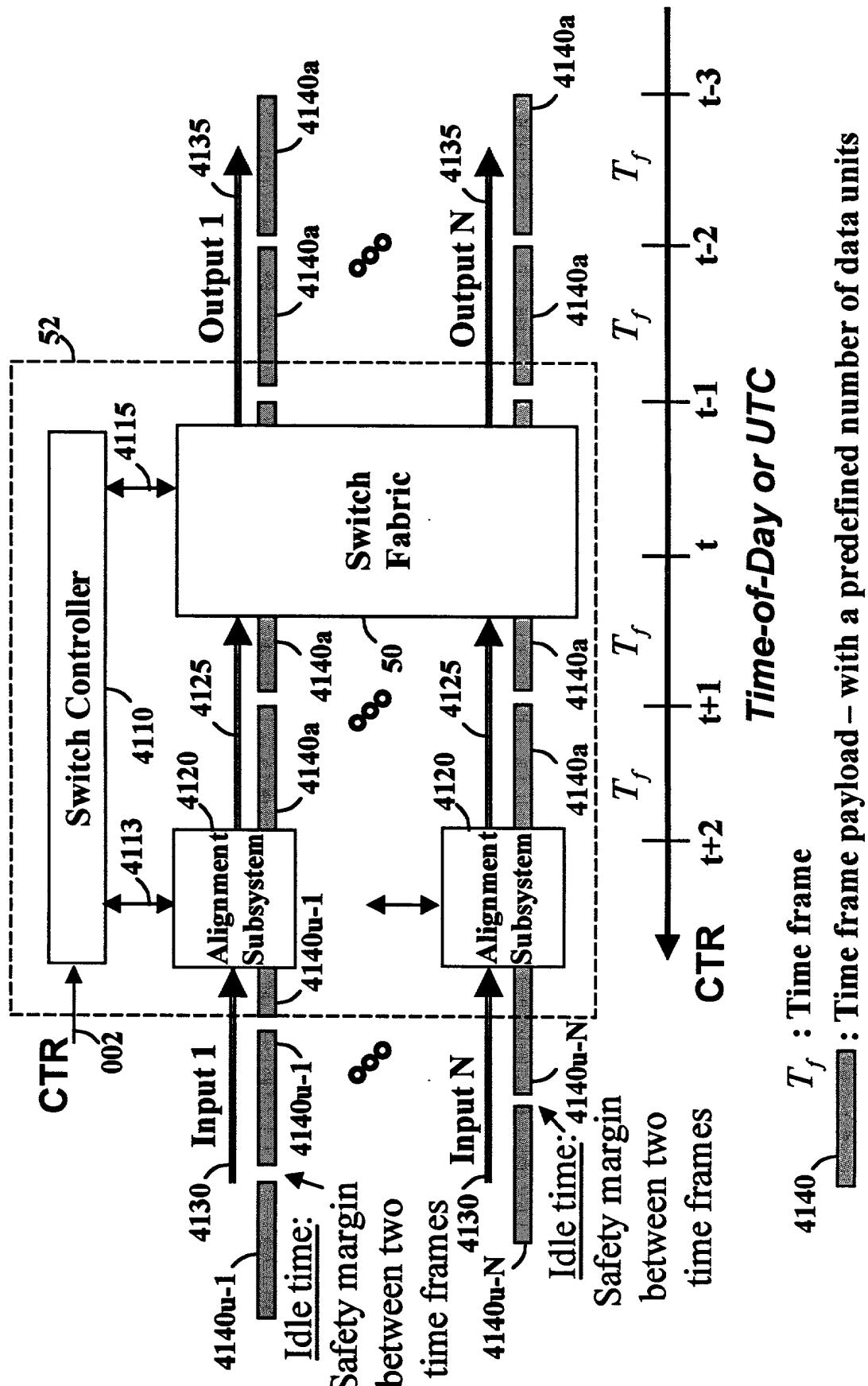


FIG. 33



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FIG. 34

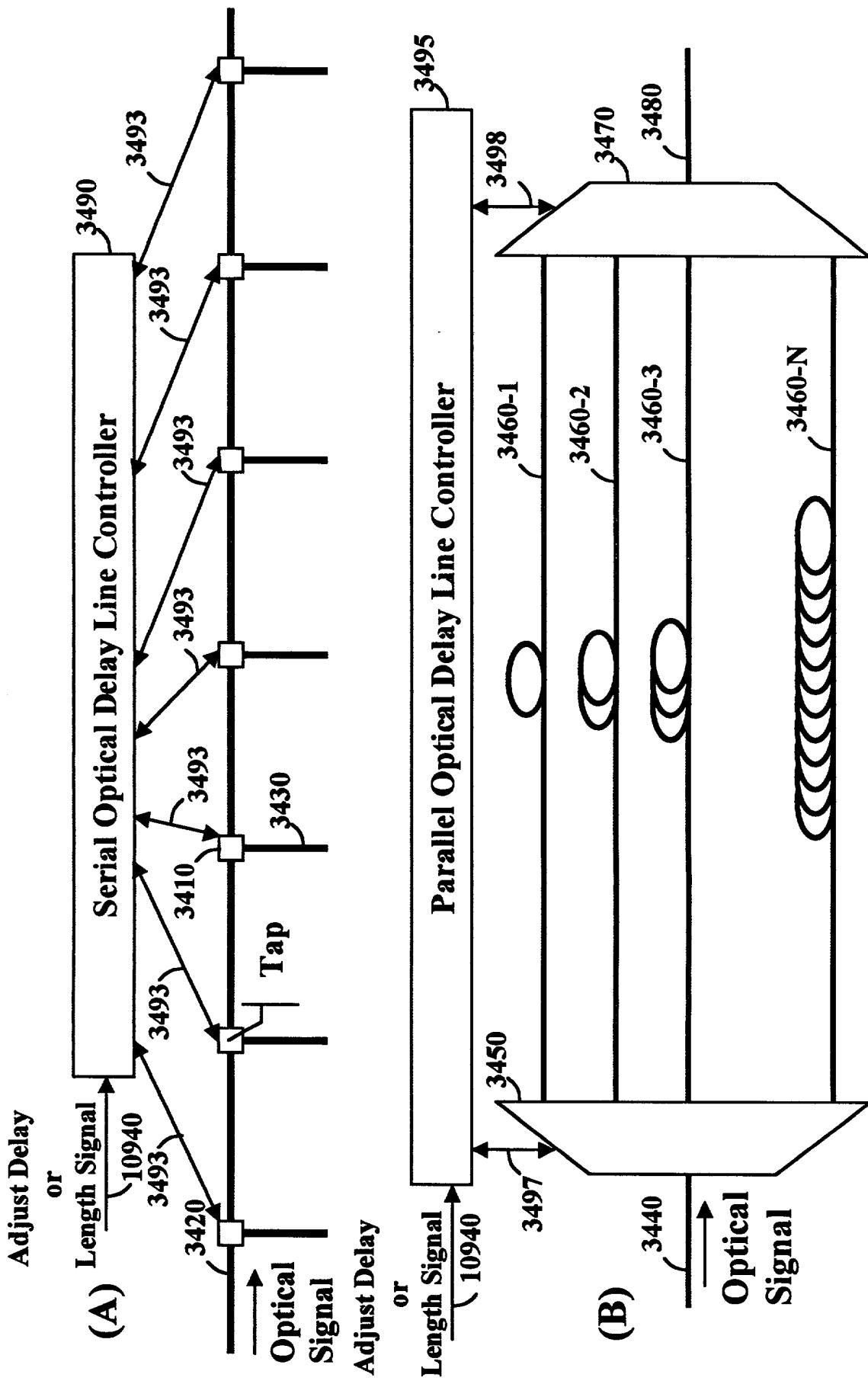


FIG. 35

POWSM: Programmable Optical Wavelength Switching Matrix $d = t_1 + 2 \cdot t_2 + 3 \cdot t_N$

